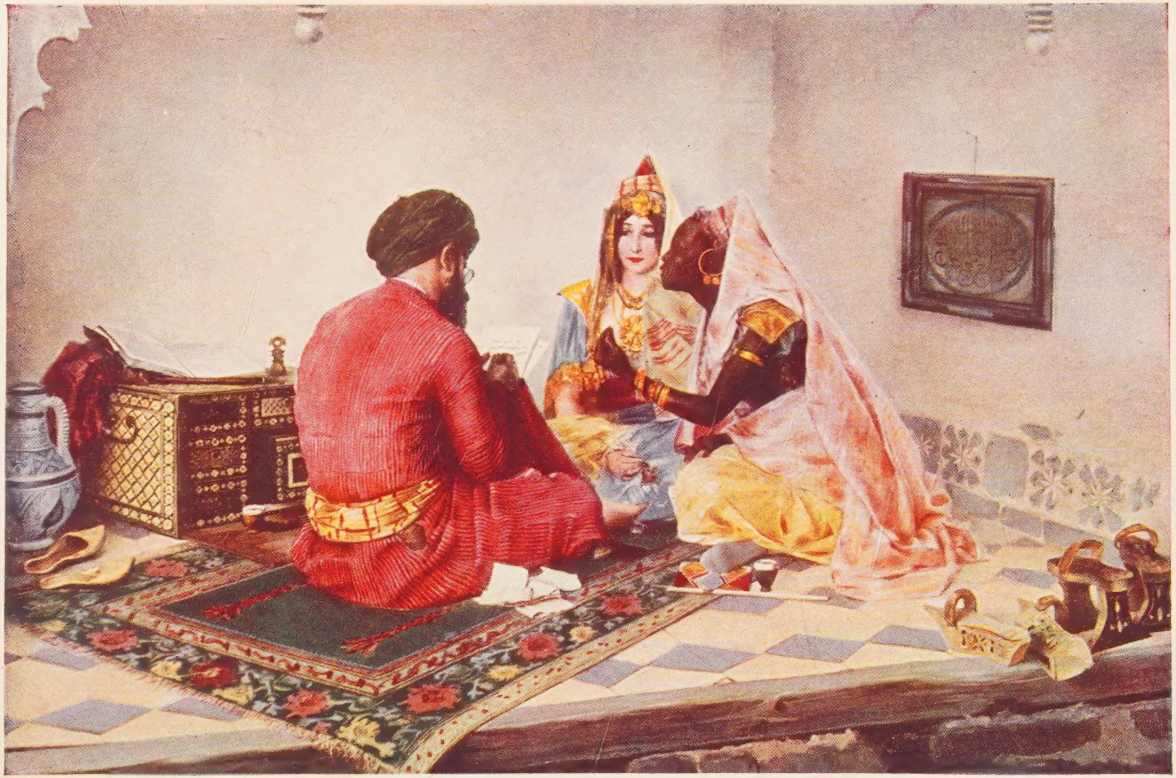
The YOUNG FOLKS TREASURY

To Vincie -
from Lester,
July, 1923.

Digitized by the Internet Archive
in 2026

https://archive.org/details/famoustravelsadv0006john



A PUBLIC SCRIBE IN TUNIS

YOUNG FOLKS' TREASURY

In 12 Volumes

HAMILTON WRIGHT MABIE
Editor

EDWARD EVERETT HALE
Associate Editor

Famous Travels and Adventures

JOHN H. CLIFFORD
Editor

VOLUME VI

NEW YORK
THE UNIVERSITY SOCIETY INC.
Publishers

Copyright, 1909, by
The University Society Inc.

PARTIAL LIST OF EDITORS AND CONTRIBUTORS

HAMILTON WRIGHT MABIE
Editor

EDWARD EVERETT HALE
Associate Editor

DANIEL EDWIN WHEELER
Managing Editor

Partial List of Contributors, Assistant Editors and Advisers:

NICHOLAS MURRAY BUTLER, President Columbia University.

WILLIAM R. HARPER, Late President Chicago University.

Hon. THEODORE ROOSEVELT, Ex-President of the United States.

Hon. GROVER CLEVELAND, Late President of the United States.

JAMES CARDINAL GIBBONS, American Roman Catholic prelate.

LAWRENCE J. BURPEE, Librarian Ottawa Public Library; author of "Canadian Life in Town and Country," etc.

BLISS CARMAN, poet, essayist, and editor.

THOMAS B. FLINT, Clerk House of Commons, Canada; editor "Parliamentary Practice and Procedure."

AGNES C. LAUT, author "Lords of the North," "Hudson's Bay Company," etc.

BECKLES WILLSON, author of "The Romance of Canada," "Life and Letters of James Wolfe," etc.

EDWARD W. BOK, editor "Ladies' Home Journal."

HENRY VAN DYKE, author, poet, and Professor of English Literature, Princeton University.

LYMAN ABBOTT, author, editor of "The Outlook."

JACOB A. RIIS, author and journalist.

EDWARD EVERETT HALE, JR., Professor at Union College.

CHARLES G. D. ROBERTS, writer of animal stories.

JANET H. KELMAN, author "Stories from the Crusades," "A Book of Butterflies," etc.

VAUTIER GOLDING, author "Life of Henry M. Stanley," etc.

LENA DALKEITH, author "A Book of Beasts," "Stories from French History," etc.

H. E. MARSHALL, author "A Child's History of England," "History of English Literature," etc.

JOEL CHANDLER HARRIS, creator of "Uncle Remus."

ROSSITER JOHNSON, author; editor of "Little Classics."

WILLIAM BLAIKIE, author of "How to Get Strong and How to Stay So."

JOSEPH JACOBS, folklore writer and editor of the "Jewish Encyclopedia."

Mrs. VIRGINIA TERHUNE ("Marion Harland"), author of "Common Sense in the Household," etc.

A. D. INNES, author "England Under the Tudors," "England's Industrial Development," etc.

EDMUND F. SELLAR, author "Life of Nelson," etc.

MARY MACGREGOR, author "King Arthur's Knights," etc.

JEANIE LANG, author "Life of General Gordon," etc.

Rev. THEODORE WOOD, F.E.S., writer on natural history.

MARGARET E. SANGSTER, author of "The Art of Home-Making," etc.

HERBERT T. WADE, editor and writer on physics.

JOHN H. CLIFFORD, editor and writer.

ERNEST INGERSOLL, naturalist and author.

IDA PRENTICE WHITCOMB, author of "Young People's Story of Music," "Heroes of History," etc.

MARK HAMBOURG, pianist and composer.

Mme. BLANCHE MARCHESI, opera singer and teacher.

ELBRIDGE S. BROOKS, author "Historic Boys," etc.

PAULINE C. BOUVÉ, author "Stories of American Heroes for Boys and Girls," etc.

CONTENTS

EARLY EXPLORERS IN MANY LANDS

	PAGE
Introduction	xiii
A Little Old World	1
Early Mariners	7
Herodotus—Hanno—Xenophon	10
Julius Cæsar as Explorer	16
The Vikings Sail the Northern Seas	21
Travelers to the East	25
Marco Polo	31
Columbus: His First Voyage	39
Columbus and the New World	46
Vasco da Gama Reaches India	51
Discovery of the Spice Islands	57
Balboa Sees the Pacific Ocean	64
Magellan Sails Round the World	68
Cortes Explores and Conquers Mexico	75
Explorers in South America	83
Cabot Sails to Newfoundland	89
Drake's Famous Voyage Round the World	92
Sir Walter Raleigh Searches for El Dorado	99

AMERICA

Father Marquette By Pauline C. Bouvé.	103
The Story of Henry Hudson By Beckles Willson.	111
Lewis and Clark	118

PAGE

Daniel Boone 123
By Pauline C. Bouvé.

Kit Carson 131
By Pauline C. Bouvé.

The Colorado Cliff-Dwellers 139
By Alfred Terry Bacon.

The Buffalo on the Plains 147
By Francis Parkman.

In the Rocky Mountains 160
By John C. Frémont.

An Ancient Mexican Palace 167
By Désiré Charnay.

Life and Scenery in Venezuela 172
By Alexander von Humboldt.

EUROPE

Spanish Life in Granada 182
By Théophile Gautier.

Old Rotterdam 196
By Edmondo de Amicis.

On the Road in Russia 204
By D. Mackenzie Wallace.

Perils of Alpine Climbing 210
By Edward Whymper.

The Midnight Sun 221
By Langley Coleridge.

Old Antwerp 227
By Rose G. Kingsley.

St. Petersburg 234
By Samuel S. Cox.

ASIA

PAGE

A Mecca Pilgrim in Disguise 243
By Richard F. Burton.

The Holy City 253
By Eliot Warburton.

The Great Ruins of Bashan 263
By J. L. Porter.

Ascent of Mount Ararat 274
By James Bryce.

The Lost City of Petra 283
By Johann Ludwig Burckhardt.

The Ride to Khiva 291
By Frederick G. Burnaby.

The Taj Mahal 308
By Joseph Moore.

Sacred Haunts of Palestine 318
By A. W. Kinglake.

AFRICA

Finding Livingstone 333
By Henry M. Stanley.

Up the Mountains of the Moon 337
By Henry M. Stanley.

The Pyramids 355
By Edward D. Clarke.

Pharaoh's Tomb 360
By Giovanni Battista Belzoni.

The Great Albert Nyanza 369
By Sir Samuel Baker.

Finding the Source of the Nile 380
By Sir Samuel Baker.

The Falls of the Zambesi 384
By David Livingstone.

MISCELLANEOUS

PAGE

Manila in the Forties 393
By Charles Wilkes.

Exploration of Teneriffe 411
By Alexander von Humboldt.

The Island of Trinidad 416
By James Anthony Froude.

The Australian Desert 426
By Peter Egerton Warburton.

Volcanic New Zealand 436
By James Anthony Froude.

Historical Sketch of Arctic Exploration 445
By Ernest Ingersoll.

Animals of the Realms of Snow 478

The Musk-Ox and Its Habits 491

Stories of Eskimo Dogs 502

The Search for the South Pole 512

ILLUSTRATIONS

VOLUME VI

FACING PAGE

A Public Scribe in Tunis ..... *Frontispiece*

They Came To Anchor and Went Ashore 22

Columbus at Open Defiance with His Crew 40

Columbus Taking Possession of San Salvador for Spain 42

Admiral Sir Francis Drake 92

Pushing Past the Guard, He Flung from His Shoulders His Rich Velvet Cloak and Spread It Over the Muddy Spot 102

Henry Hudson and Some of His Crew Set Adrift by Mutineers 114

Captain Meriwether Lewis—Captain William Clark 118

Bright Angel Cañon from O'Neill's Point, Grand Cañon of the Colorado 140

Buffalo In the Canadian National Park 148

Mount Corcoran 160

Alexander Von Humboldt 172

A Flood in Holland 198

Russian Peasants 204

Climbing the Alps 210

FACING PAGE

Antwerp, Belgium, from the Harbor 228
Scene in the Holy Land 254
The Taj Mahal 308
Buddhist Priests 316
Sir Henry M. Stanley 338
The Great Pyramid of Gizeh 356
Ruins of the Temple of Isis on the Isle of Philæ... 372
Peary's Ship "Roosevelt" 444
An Iceberg in Baffin Bay 444
Steam Sealing Vessels in Baffin Bay 448
An Eskimo Family in Peary's Service 448
Whaling in Baffin Bay 454
The Farthest Point North 460
President Roosevelt's Farewell to Peary 468
Dr. F. E. Cook on Skis 468
Eskimo Children 480
Polar Bears on the "Erik" 480
Esquimo Boys 488
Little Auks on the Greenland Coast 490
Landing Equipments at Cape Sabine 490
Eskimo Encampment, Peteravik, Ellesmere Land, Eskimo Skin Summer Tents at Etah 510

INTRODUCTION

"Hope went before them, and the world was wide."

SUCH was the spirit in which the exploration of the world was accomplished. It was the inspiration that carried men of old far beyond the sunrise into those magic and silent seas whereon no boat had ever sailed. It is the incentive of those to-day with the wander-thirst in their souls, who travel and suffer in the traveling, though there are fewer prizes now to win. But to many brave souls

> "The reward is in the doing,
> And the rapture of pursuing
> *Is* the prize."

"To travel hopefully," says Stevenson, "is a better thing than to arrive."

This book of Famous Travels and Adventures contains records of splendid endurance, of hardships bravely borne, of silent toil, of courage and resolution unequaled in the annals of mankind, of self-sacrifice unrivaled, and faithful lives laid ungrudgingly down. Of the many who went forth, only the few attained. But while we read of those master spirits who succeeded, let us never forget those who failed to achieve.

Enthusiasm was the secret of success. Among the best of crews there was always some one who would have turned back. The world would never have been explored had it not been for those finer spirits who resolutely went on—even to the death.

This firmness of purpose it was that led the ancient discoverers to explore far distant lands; that drew Columbus across the trackless Atlantic; that nerved Vasco da Gama to

double the Stormy Cape; that impelled Magellan to brave the dreaded strait now called by his name; that made it possible for men to face, without flinching, the ice-bound regions of the globe, till at last the poles were found.

"There is no land uninhabitable, nor sea unnavigable," said the men of the sixteenth century, when England set herself to take possession of her heritage in the North. Such a heroic temper could overcome all things. But the cost was great, the sufferings intense.

"Having eaten our shoes and saddles boiled with a few wild herbs, we set out to reach the kingdom of gold," said Orellana in 1540.

Again, there is Franklin returning from the arctic coast, and stilling the pangs of hunger with "pieces of singed hide mixed with lichen," varied with "the horns and bones of a dead deer fried with some old shoes."

The dangers of the way were manifold; for the early explorers had no land map or ocean chart to guide them; there were no lighthouses to warn the strange mariner of dangerous coast and angry surf; no books of travel to relate the weird doings of fierce and inhospitable savages; no tinned foods to prevent the terrible scourge of sailors, scurvy. In their little wooden sailing ships the men of old faced every conceivable danger, and surmounted obstacles unknown to modern civilization.

For the most part we are struck with the light-heartedness of the old sailors, the shout of gladness with which men went forth on these hazardous undertakings, knowing not how they would arrive, or what might befall them by the way—went forth in the smallest of wooden ships, with the most incompetent of crews, to face the dangers of unknown seas.

"God hath given us some things, and not all things, that our successors also might have somewhat to do," wrote Barents in the sixteenth century. There may not be much left, but with the words of Kipling's "Explorer" we may fitly conclude:

> "Something hidden. Go and find it. Go and look behind the Ranges—
> Something lost behind the Ranges. Lost and waiting for you. Go!"

EARLY EXPLORERS IN MANY LANDS

A LITTLE OLD WORLD

NO story is complete unless it begins at the very beginning. But where is the beginning? Where is the dawn of geography—the knowledge of our earth? What was it like before the first explorers made their way into distant lands? Every day that passes we are gaining fresh knowledge of the dim and silent past.

Every day men are patiently digging in old heaps that once were the sites of busy cities. They are revealing to us the life-stories of people who dwelt in those cities; they are making known to us secrets written on weather-worn stones and tablets, bricks and cylinders, never before even guessed at.

Thus we read the story of ancient days, and we wonder what marvelous discovery will thrill us next.

For the earliest account of the old world—a world made up apparently of a little land and a little water—we turn to an old papyrus, the oldest in existence, which tells us in familiar words, unsurpassed for their poetry and simplicity, of that great dateless time so full of mystery and awe.

"In the beginning God created the heaven and the earth. And the earth was waste and void; and darkness was upon the face of the deep: and the spirit of God moved upon the face of the waters. . . . And God said, Let there be a firmament in the midst of the waters, and let it divide the waters from the waters. And God . . . divided the waters which were under the firmament from the waters which were above

the firmament. . . . And God said, Let the waters under the heaven be gathered into one place, and let the dry land appear. . . . And God called the dry land Earth; and the gathering together of the waters called He Seas."

Thus beautifully did the children of men express their earliest idea of the world's distribution of land and water.

And where, on our modern maps, was this little earth, and what was it like? Did trees and flowers cover the land? Did rivers flow into the sea? Listen again to the old tradition that still rings down the ages:

"And the Lord God planted a garden eastward in Eden . . . and a river went out of Eden to water the garden; and from thence it was parted, and became four heads. The name of the first is Pison . . . and the name of the second river is Gihon; the name of the third river is Hiddekel [Tigris]. And the fourth river is Euphrates."

Now look at a modern map of Asia. Between Arabia and Persia there is a long valley watered by the Tigris and Euphrates, rivers which rise in Armenia and flow into the Persian Gulf. This region was the traditional "cradle of the human race." Around and beyond was a world with surging seas, with lands of trees and flowers, a world with continents and lakes and bays and capes, with islands and mountains and rivers.

There were vast deserts of sand rolling away to right and to left; there were mountains up which no man had climbed; there were stormy seas over which no ship had ever sailed. But these men of old had never explored far. They believed that their world was just a very little world with no other occupants than themselves. They believed it to be flat, with mountains at each end on which rested a solid metal dome known as the "firmament."

In this shining circle, as they thought, were windows, in and out of which the sun would creep by day and the moon and stars by night. And the whole of this world, they thought, was balanced on the waters. There was water above—the "waters which were above the firmament"—and water below, and water all round.

Long ages pass away. Let us look again at the green valley of the Euphrates and Tigris. It has been called the "nursery of nations"; names have been given to various regions round about, and cities have risen on the banks of the rivers. Babylonia, Mesopotamia, Chaldea, Assyria—all these names belonged to this region, and around each centers some of the most interesting history and legend in the world.

Rafts on the river and caravans on the land carried merchandise far and wide; men made their way to the "Sea of the Rising Sun," as they called the Persian Gulf, and to the "Sea of the Setting Sun," as they called the Mediterranean. They settled on the shores of the Caspian Sea, on the shores of the Black Sea, on the shores of the Red Sea. They carried on magnificent trade; cedar, pine, and cypress were brought from Lebanon to Chaldea, limestone and marble from Syria, copper and lead from the shores of the Black Sea.

And these dwellers about Babylonia built up a wonderful civilization. They had temples and brick houses, libraries of tablets revealing knowledge of astronomy and astrology, and they had a literature of their own. Suddenly from out the city of Ur (Kerbela), near the ancient mouth of the Euphrates, appears a traveler. Doubtless there had been many before, but records are scanty and hard to piece together, and a detailed account of a traveler with a name is very interesting.

"Abram went . . . forth to go into the land of Canaan. . . . And Abram journeyed, going on still toward the south. And there was a famine in the land: and Abram went down into Egypt to sojourn there." He would have traveled by the chief caravan routes of Syria into Egypt. Here, about the fertile mouth of the Nile, he would have found an ancient civilization as wonderful as that to which he was accustomed in Babylonia. It was a grain-growing country, and when there was famine in other lands, there was always "corn in Egypt" —thanks to the mighty life-giving Nile.

But we must not linger over the old civilization, over the wonderful empire governed by the Pharaohs or kings, first from Memphis (Cairo), and then from the hundred-gated Thebes; must not linger over these old pyramid-builders, nor

over the temples, sphinxes, and statues of ancient Egypt. Even before Abram came into their country, the Egyptians were famous for their shipping and navigation. Old pictures and tombs recently discovered tell us this.

On the coast of the Red Sea they built their long, narrow ships, which were rowed by some twenty paddlers on either side, and steered by three men standing in the stern. With one mast and a large sail they flew before the wind. They had to go far afield for their wood; we find an Egyptian being sent "to cut down four forests in the south in order to build three large vessels . . . out of acacia-wood."

Petrie tells us of an Egyptian sailor who was sent to Punt or Somaliland "to fetch for Pharaoh sweet-smelling spices." He was shipwrecked on the way, and this is the account of his adventures:

" 'I was going to the mines of Pharaoh, and I went down on the sea on a ship with a hundred and fifty sailors of the best of Egypt, whose hearts were stronger than lions. They had said that the wind would be contrary, or that there would be none. But as we approached the land the wind rose and threw up high waves. As for me, I seized a piece of wood; but those who were in the vessel perished, without one remaining. A wave threw me on an island; after that I had been three days alone without a companion beside my own heart, I laid me in a thicket, and the shadow covered me. I found figs and grapes, all manner of good herbs, berries and grain, melons of all kinds, fishes and birds. I lighted a fire and I made a burnt-offering unto the gods. Suddenly I heard a noise as of thunder, which I thought to be that of a wave of the sea. The trees shook and the earth was moved. I uncovered my eyes and I saw that a serpent drew near; his body was as if overlaid with gold, and his color as that of true lazuli.'

" 'What has brought thee here, little one, to this isle, which is in the sea and of which the shores are in the midst of the waves?' asked the serpent.

"The sailor told his story kneeling on his knees, with his face bowed to the ground.

" 'Fear not, little one, and make not thy face sad,' continued the serpent, 'for it is God who has brought thee to this isle of the blest, where nothing is lacking and which is filled with all good things. Thou shalt be four months in this isle. Then a ship shall come from thy land with sailors, and thou shalt go to thy country. As for me, I am a prince of the land of Punt. I am here with my brethren and children around me; we are seventy-five serpents, children and kindred.'

"Then the grateful sailor promised to bring all the treasures of Egypt back to Punt, and 'I shall tell of thy presence unto Pharaoh; I shall make him to know of thy greatness,' said the Egyptian stranger.

"But the strange prince of Punt only smiled.

" 'Thou shalt never more see this isle,' he said; 'it shall be changed into waves.' "

Everything came to pass as the serpent said. The ship came, gifts were lavished on the sailor from Egypt, perfumes of cassia, of sweet woods, of cypress, incense, ivory tusks, baboons, and apes, and thus laden he sailed home to his own people.

Long centuries after this we get another glimpse at the land of Punt. This time it is in the reign of Queen Hatshepsu, who sent a great trading expedition into this famous country. Five ships started from Thebes, sailing down the river Nile and probably reaching the Red Sea by means of a canal. Navigation in the Red Sea was difficult; the coast was steep and inhospitable; no rivers ran into it. Only a few fishing villages lay along the coasts used by Egyptian merchants as markets for mother-of-pearl, emeralds, gold, and sweet-smelling perfumes. Thence the ships continued their way, the whole voyage taking about two months. Arrived at Punt, the Egyptian commander pitched his tents upon the shore, to the great astonishment of the inhabitants.

"Why have ye come hither unto this land, which the people of Egypt know not?" asked the Chief of Punt. "Have ye come through the sky? Did ye sail upon the waters or upon the sea?"

Presents from the Queen of Egypt were at once laid before

the Chief of Punt, and soon the seashore was alive with people. The ships were drawn up; gang-planks were heavily laden with "marvels of the country of Punt." There were heaps of myrrh and resin, of fresh myrrh-trees, ebony and pure ivory, cinnamon-wood, incense; there were baboons, monkeys, dogs, natives, and children. "Never was the like brought to any king of Egypt since the world stands." And the ships voyaged safely back to Thebes with all their booty and with pleasant recollections of the people of Somaliland.

In spite of these little expeditions the Egyptian world still seemed very small. The Egyptians thought of the earth with its land and sea as a long, oblong sort of box, the center of which was Egypt. The sky stretched over it like an iron ceiling, the part toward the earth being sprinkled with lamps hung from strong cables lighted by night and extinguished by day. Four forked trunks of trees upheld the sky-roof. But, lest some storm should overthrow these tree-trunks, there were four lofty peaks connected by chains of mountains. The southern peak was called the "Horn of the Earth"; the eastern, the "Mountain of Birth"; the western, the "Region of Life." The southern peak was invisible—and why? Because (the Egyptians thought) the Great Sea, the "Very Green," the Mediterranean, lay between that peak and Egypt. Beyond these mountain-peaks, supporting the world, rolled a great river, an ocean stream, and the sun was as a ball of fire placed on a boat and carried round the ramparts of the world by the all-encircling water.

So we realize that the people living in Babylonia about the river Euphrates, and those living in Egypt about the river Nile, had very strange ideas of the little old world around them.

EARLY MARINERS

THE law of the universe is progress and expansion, and the little old world was soon discovered to be larger than men thought.

In Syria, the highway between Babylonia and Egypt, dwelt a tribe of dusky people known as Phœnicians. Some have thought that they were related to our old friends in Somaliland, and that long years ago they had migrated north to the seacoast of that part of Syria known as Canaan.

Living on the seashore, washed by the tideless Mediterranean, they soon became skilful sailors. They built ships and ventured forth on the deep; they made their way to the islands of Cyprus and Crete and thence to the islands of Greece, bringing back goods from other countries to barter with their less daring neighbors. They reached Greece itself, and cruised along the northern coast of the Great Sea to Italy, along the coast of Spain to the Rock of Gibraltar, and out into the open Atlantic.

How their little sailing boats lived through the storms of that great ocean, none may know, for Phœnician records are lost, but we have every reason to believe that they reached the northern coast of France and brought back tin from the islands known to them as the Tin Islands. In their home markets were found all manner of strange things from foreign unknown lands, discovered by these master mariners—the admiration of the ancient world.

"The ships of Tarshish," said the old poet, "did sing of thee in thy market, and thou wast replenished and made very glorious in the midst of the seas; thy rowers have brought thee into great waters; the east wind hath broken thee in the midst of the seas."

All the world knew of the Phœnician seaports, Tyre and

Sidon. They were as famous as Memphis and Thebes on the Nile, as magnificent as Nineveh on the Tigris and Babylon on the Euphrates. Men spoke of the "renowned city of Tyre," whose merchants were as princes, whose "traffickers" were among the honorable of the earth. "O thou that art situate at the entry of the sea," cries the poet again, as the greatness of Tyre is passing away, "which art a merchant of the people from many isles. . . . Thy borders are in the midst of the seas; thy builders have perfected thy beauty. They have made all thy ship-boards of fir-trees . . . they have taken cedars of Lebanon to make masts for thee. Of the oaks of Bashan have they made thy oars. . . . Fine linen with broidered work from Egypt was that which thou spreadest forth to be thy sail. . . . The inhabitants of Sidon . . . were thy mariners; thy wise men were thy pilots."

As time goes on, early groups round the Euphrates and the Nile continue, but new nations form and grow, new cities rise, new names appear. Centuries of men live and die, ignorant of the great world that lies about them—"Lords of the eastern world that knew no west."

England was yet unknown, America undreamt of, Australia still a desolate island in an unknown sea. The burning eastern sun shone down on vast stretches of desert land, uninhabited by man; great rivers flowed through dreary swamps unrealized; tempestuous waves beat against the shores, and melancholy winds swept over the face of endless ocean solitudes.

And still, according to men's untutored minds, the world is flat, the world is very small, and it is surrounded by ever-flowing waters, beyond which all is dark and mysterious.

Around the shores of the Mediterranean Sea, along the coasts of Africa and Europe, were colonies discovered by the boundless energy and daring skill of the Phœnicians. But those colonies were not yet called by their names. The Phœnicians discovered and explored, but they kept their information to themselves, and especially refused to divulge their voyages to the Greeks.

A story is told at a later date than this of a Phœnician ship-

master bound for the Tin Islands, who suddenly discovered that he was being followed by a strange ship evidently bent on finding out where these unknown islands lay. The Phœnician purposely ran his ship on to a shoal in order to keep the secret of the discovery. When he returned home his conduct was upheld by the rulers of the land.

But though the Phœnicians have left us no record of their travels and voyages, they had been the carriers of knowledge, and it was from them that the Greeks learned of "the extreme regions of the world" and of the dim "far west." Indeed, it is highly probable that from the Phœnicians they got material for their famous legend of the Argonauts and their adventures in the Black Sea. Though the story is but legendary, and it has been added to with the growing knowledge of the world, yet it gives an idea of the perils that beset the sailors of those remote ages and of their limitations.

We must remember that, like the Egyptians and Babylonians, Phœnicians and early Greeks had childish ideas as to the form of the earth. To them it was a circular plane, surrounded by the ocean, which they believed to be a broad, deep-running river flowing round and round the world. Into this ocean stream ran all the rivers and seas known to them. Over the earth was raised a solid firmament of bronze in which the stars were set, and this was supported on tall pillars "which kept the heaven and the earth asunder."

HERODOTUS—HANNO—XENOPHON

THE greatest traveler of olden times now comes upon the scene—Herodotus, the Greek, the "Father of History."

He is a traveler as well as a writer. He has journeyed as one eager for knowledge, with a "hungry heart" and a keen, observant eye. He tells us what he has seen with his eyes, what he has heard with his ears. He insists that the world is flat; he acknowledges that it is divided into two parts —Europe and Asia; but he can afford to laugh at those who draw maps of the world "without any sense to guide them," in which they make the whole world circular, as if drawn with a pair of compasses, with the ocean stream running round it, and make Europe and Asia of equal size.

His first journey is to Egypt. "I speak at length about Egypt," he says, "because it contains more marvelous things than any other country—things too strange for words. Not only is the climate different from that of the rest of the world and the rivers unlike any other rivers, but the people also, in most of their manners and customs, reverse the common practice of mankind. The women are employed in trade and business, while the men stay at home to spin and weave. Other nations in weaving throw the woof up the warp, but an Egyptian throws it down. In other countries sons are constrained to make provision for their parents; in Egypt it is not only the sons, but the daughters. In other countries the priests have long hair; in Egypt their heads are shaven. Other nations fasten their ropes and hooks to the outside of their sails, but the Egyptians to the inside. The Greeks write and read from left to right, but the Egyptians from right to left."

After sailing for some seven hundred miles up the Nile from the coast, past Heliopolis, the once famous city of ancient Egypt, past Memphis, the old capital, past Thebes, with its hundred gates, to Elephantine, the "ivory island," opposite what is now Assuan, he is more than ever puzzled about the river's course and the reason of its periodical floods.

"Concerning the nature of the river, I was not able to gain any information from the priests. I was particularly anxious to learn from them why the Nile, at the commencement of the summer solstice, begins to rise and continues to increase for a hundred days; and why, as soon as that number is past, it forthwith retires and contracts its stream, continuing low during the whole of the winter till the summer solstice comes round again. On none of these points could I obtain any explanation from the inhabitants, though I made every inquiry."

The sources of the Nile entirely baffled Herodotus as they baffled many another later explorer long years after he had passed away. "Of the sources of the Nile no one can give any account, since the country through which it passes is desert and without inhabitants," he explains, his thirst for knowledge unsatisfied. Some priest volunteers this explanation: On the frontiers of Egypt are two high mountain-peaks called Crophi and Mophi; in an unfathomable abyss between the two rose the Nile. But Herodotus does not believe in Crophi and Mophi; he inclines to the idea that the Nile rises away in the west and flows eastward right across Libya.

He traveled somewhat about Libya himself, little realizing the size of the great continent of Africa through which he passed. Many a strange tale of these unknown parts did he relate to his people at home. He had seen the tallest and handsomest race of men in the world, who lived to the age of one hundred and twenty years; gold was so abundant that it was used even for the prisoners' chains; he had seen folks who lived on meat and milk only, never having seen bread or wine.

Some thirty days' journey from the land of the lotus-eaters he had found tribes who hunted with four-horse chariots, and

whose oxen walked backward as they grazed, because their horns curved outward in front of their heads, and if they moved forward the horns would stick in the ground.

Right across the desolate sandy desert of the north, Herodotus seems to have made his way. The "region of the wild beasts" must have been truly perilous, "for this is the tract," he says, "in which huge serpents are found, and the lions, the elephants, the bears, and the horned asses."

He also tells us of antelopes, gazelles, common asses, foxes, wild sheep, jackals, and panthers. There is no end to the quaint sights he records. Here is a tribe whose wives drive the chariots to battle; here another who paint themselves red and eat honey and monkeys; another who grow their hair long on the right side of their heads and shave it close on the left. Back through Egypt to Syria went this observant traveler, visiting the famous seaport of Tyre on the way. "I visited the temple of Hercules at that place and found two pillars, one of pure gold, the other of emerald, shining with great brilliancy at night." That temple was already twenty-three hundred years old.

Herodotus makes some astounding statements about various parts of the world. He asserts that a good walker could walk across Asia Minor, from north to south, in five days, a distance we now know to be three hundred miles! He tells us that the Danube rises in the Pyrenees Mountains and flows right through Europe till it empties its waters into the Black Sea, giving us a long and detailed account of a country he calls Scythia (Russia), with many rivers flowing into this same Black Sea.

But here we must leave the old traveler and picture him reading aloud to his delighted hearers his account of his discoveries and explorations, discussing with the learned Greeks of the day the size and wonders of the world as they imagined it.

News traveled slowly in those ancient days, and we know that the Phœnicians were very fond of keeping their discoveries secret, but it seems strange that Herodotus appears never to have heard the story of Hanno the Carthaginian, who

coasted along the west of North Africa, being the first explorer to reach the place we know as "Sierra Leone."

Hanno's "Periplus," or the "Coasting Survey of Hanno," is one of the few Phœnician documents that have lived through the ages. In it the commander of the expedition tells his own story. With an idea of colonizing, he left Carthage—the most famous of the Phœnician colonies—with sixty ships containing an enormous number of men and women.

"When we had set sail," says Hanno, "and passed the pillars [of Hercules] after two days' voyage, we founded the first city. Below this city lay a great plain. Sailing thence westward we came to a promontory of Libya thickly covered with trees. Here we built a temple to the sea-god and proceeded thence half a day's journey eastward, till we reached a lake lying not far from the sea and filled with abundance of great reeds. Here were feeding elephants and a great number of other wild animals. After we had gone a day's sail beyond the lakes we founded cities near to the sea."

Making friends with the tribes along the coast, they reached the Senegal River. Here they fell in with "savage men clothed with the skins of beasts," who pelted them with stones so that they could not land. Past Cape Verde they reached the mouth of the Gambia, "great and broad and full of crocodiles and river-horses," and thence coasted twelve days to the south and again five days to the south, which brought them to Sierra Leone—the Lion Mountain, as it was called long years after by the Portuguese.

Here Hanno and his party landed, but as night approached they saw flames issuing from the island and heard the sound of flutes and cymbals and drums and the noise of confused shouts.

"Great fear then came upon us; we sailed therefore quickly thence much terrified, and passing on for four days found at night a country full of fire. In the middle was a lofty fire, greater than all the rest, so that it seemed to touch the stars. When day came on we found that this was a great mountain which they called the chariot of the gods." They had a last adventure before they turned homeward at what

they called the Isle of Gorillas. Here they found a "savage people" (gorillas) whom they pursued, but were long unable to catch. At last they managed to catch three. "But when these," says the narrative, "biting and tearing those that led them, would not follow us, we slew them and, flaying off their skins, carried them to Carthage."

Then abruptly this quaint account of the only Phœnician voyage on record stops. "Further," says the commander, "we did not sail, for our food failed us."

Further knowledge of the world was now supplied by the Greeks, who were rapidly asserting themselves and settling round the coast of the Mediterranean, as the Phœnicians had done before them. In more ancient days, as we have seen, Babylonians and Egyptians had dominated the little world; now the power was shifting to the Greeks and Persians. Persia had become a very important country with fifty-six subject states paying tribute to her, including Egypt. Efforts to include Greece had failed.

In the year 401 B.C. one Artaxerxes sat on the throne of Persia, the mighty empire that extended eastward beyond the knowledge of Greeks or Phœnicians, even to the unknown regions of the Indus. He had reigned for many years, when Cyrus, his brother, a dashing young prince, attempted to seize the throne. Collecting a huge army, including the famous Ten Thousand Greeks, he led them by way of Phrygia, Cilicia, and along the banks of the Euphrates to within fifty miles of the gates of Babylon. The journey took nearly five months, a distance of one thousand seven hundred miles through recognized tracks. Here a battle was fought and Cyrus was slain.

It was midwinter when the Ten Thousand Greeks who had followed their leader so loyally through the plains of Asia Minor found themselves friendless and in great danger in the very heart of the enemy's country.

How Xenophon—a Greek volunteer, who had accompanied the army from the shores of Asia Minor—rose up and offered to lead his countrymen back to Greece is a matter of history. It would take too long to tell in detail how they marched north-

ward through the Assyrian plains, past the neighborhood of Nineveh, till they reached the mountain regions that were known to be inhabited by fierce fighters, unconquered even by the powerful Persians.

Up to this time their line of retreat had followed the "royal road" of merchants and caravans. Their only chance of safety lay in striking north into the mountains inhabited by this warlike tribe who had held out amid their wild and rugged country against the Persians themselves. They now opposed the Greeks with all their might, and it took seven days of continuous fighting to reach the valley that lay between them and the high tableland of Armenia. They crossed the Tigris near its source, and a little farther on they also crossed the Euphrates not far from its source, so they were informed by the Armenians. They now found themselves some five or six thousand feet above sea-level and in the midst of a bitter Armenian winter. Snow fell heavily, covering all tracks, and day after day a cold northeast wind, "whose bitter blast was torture," increased their sufferings as they plowed their way on and on through such depths of snow as they had never seen before.

Many died of cold and hunger, many fell grievously sick, and others suffered from snow-blindness and frostbite. But Xenophon led his army on, making his notes of the country through which they were toiling, measuring distances by the day's march, and at last one day when the soldiers were climbing a steep mountain, a cry, growing louder and more joyous every moment, rent the air:

"Thalassa! Thalassa!" (The sea! The sea!)

True enough, on the distant horizon, glittering in the sunlight, was a narrow silver streak of sea—the Black Sea—the goal of all their hopes. The long struggle of five months was over; they could sail home now along the shores of the Black Sea.

In a work known as the "Anabasis," Xenophon wrote the adventures of the Ten Thousand Greeks, and no geographical explorer ever recorded his travels through unknown countries more faithfully than did the Greek leader so long ago.

JULIUS CÆSAR AS EXPLORER

IT is interesting to find Julius Cæsar, the great Roman warrior, not only conquering, but exploring. It was Cæsar who first dispelled the mist that lay over the country about the French Seine, the German Rhine, the English Thames—Cæsar who gives us the first graphic account of crossing the English Channel from France to England.

Since the days of Alexander the center of empire had shifted from Greece to Rome, and Rome was now conquering and annexing land, as Persia had done in the olden days. Hence it was that in 58 B.C. Julius Cæsar was appointed governor of a new province recently brought under Roman sway, stretching from the Alps to the Garonne and northward to the Lake of Geneva, which at this time marked the frontier of the Roman Empire. Cæsar made no secret of his intention to subdue the tribes to the north of his province and bring all Gaul under the dominion of Rome. His appointment carried with it the command of four legions, including some twenty thousand soldiers. His chance soon came, and we find Cæsar, with all the ability of a great commander, pushing forward with his army into the very heart of France one hundred and fifty miles beyond the Roman frontier.

On the banks of the river Saône he defeated a large body of Celtic people who were migrating from Switzerland to make their homes in the warmer and roomier plains at the foot of the Pyrenees.

While the defeated Celts returned to their chilly homes among the mountains, victorious Cæsar resolved to push on at the head of his army toward the Rhine, where some German tribes under a "ferocious headstrong savage" threatened to overrun the country. After marching through utterly unknown country for three days, he heard that fresh swarms

of invaders had crossed the Rhine, intending to occupy the more fertile tracts on the French side. They were making for the town we now call Besançon—then, as now, strongly fortified, and nearly surrounded by the river Doubs. By forced marches night and day, Cæsar hastened to the town and took it before the arrival of the invaders.

Accounts of the German tribes even now approaching were brought in by native traders and Gaulish chiefs, until the Roman soldiers were seized with alarm. These Germans, said the traders, were "men of huge stature, incredible valor, and practised skill in wars; many a time they had themselves come across them, and had not been able to look them in the face or meet the glare of their piercing eyes."

The Romans realized that they were in an unknown land, about to fight against an unknown foe. Violent panic seized them, "completely paralyzing every one's judgment and nerve." Some could not restrain their tears; others shut themselves up in their tents and bemoaned their fate. "All over the camp men were making their wills," until Cæsar spoke, and the panic ceased. Seven days' march brought them to the plain of Alsace, some fifty miles from the Rhine. A battle was fought with the German tribes, and "the enemy all turned tail and did not cease their flight until they reached the Rhine." Some swam across, some found boats, many were killed by the Romans in hot pursuit.

For the first time Romans beheld the German Rhine—that great river that was to form a barrier for so long between them and the tribes beyond. But Cæsar's exploration was not to end here. The following year found him advancing against the Belgæ—tribes living between the Rhine and the Seine. In one brilliant campaign he subdued the whole of northeastern Gaul from the Seine to the Rhine. Leaving Roman soldiers in the newly conquered country, he returned to his province, and was some eight hundred miles away when he heard that a general rebellion was breaking out in that part we now know as Brittany. He at once ordered ships to be built on the Loire, "which flows into the ocean," oarsmen to be trained, seamen and pilots assembled.

The spring of 56 B.C. found Cæsar at the seat of war. His ships were ready on the Loire. But the navy of the Veneti was strong. They were a seagoing folk, who knew their own low rocky coast, intersected by shallow inlets of the sea; they knew their tides and their winds. Their flat-bottomed boats were suitable to shallows and ebbing tides. Bows and stern stood high out of the water to resist heavy seas and severe gales; the hulls were built of oak. Leather was used for sails to withstand the violent ocean storms. The long Roman galleys were no match for these, and things would have gone badly had not Cæsar devised a plan for cutting the enemy's rigging with hooks "sharpened at the end and fixed to long poles." With these the Romans cut the rigging of the enemy's ships forming the fleet of Brittany; the sails fell and the ships were rendered useless. One after another they were easily captured, and at sunset the victory lay with the Romans.

The whole of Gaul, from the Rhine to the Pyrenees, seemed now subdued. Cæsar had conquered as he explored, and the skill of his well-disciplined army triumphed everywhere over the untrained courage of the barbarian tribes.

Still, the German tribes were giving trouble about the country of the Rhine, and in the words of the famous "Commentaries," we are told that "Cæsar was determined to cross the Rhine, but he hardly thought it safe to cross in boats. Therefore, although the construction of a bridge presented great difficulties on account of the breadth, swiftness, and depth of the stream, he nevertheless thought it best to make the attempt or else not cross at all." Indeed, he wanted to impress the wild German people on the other side with a sense of the vast power of the Roman Empire. The barbarian tribes beyond must, indeed, have been impressed with the skill of the Roman soldier. For in ten days the bridge was completed: timber had been hewn from the forest, brought to the banks of the Rhine, worked into shape, piles driven into the bed of the river, beams laid across. And Cæsar led his army in triumph to the other side. They stood for the first time in the land of the Germans, near the modern town

of Coblenz, and after eighteen days on the farther side, they returned to Gaul, destroying the bridge behind them.

Cæsar had now a fresh adventure in view. He was going to make his way to Britain. The summer of 55 B.C. was passing, and "in these parts, the whole of Gaul having a northerly trend, winter sets in early," wrote Cæsar afterward. There would be no time to conquer, but he could visit the island, find out for himself what the people were like, learn about harbors and landing-places; "for of all this the Greeks knew practically nothing. No one, indeed, readily undertakes the voyage to Britain except traders, and even they know nothing of it except the coast."

Cæsar summoned all the traders he could collect and inquired the size of the island, what tribes dwelt there, their names, their customs, and the shortest sea-passage. Then he sent for the ships which had vanquished the fleet of Brittany the previous year; he also assembled some eighty merchant ships on the northern coast of Gaul, probably not very far from Calais.

It was near the end of August, when soon after midnight the wind served and he set sail. A vision of the great Roman —determined, resolute—rises before us as, standing on the deck of the galley, he looks out on to the dark waters of the unknown sea bound for the coast of England. After a slow passage the little fleet arrived under the steep white cliffs of the southern coast about nine o'clock next morning. Armed forces of barbarians stood on the heights above Dover. Finding it impossible to land, Cæsar gave orders to sail some seven miles farther along the coast, where they ran the ships aground not far from Deal.

But the visit of the Romans to Britain on this occasion lasted but three days, for a violent storm scattered the ships with the horses on board. "The same night," says Cæsar, "it happened to be full moon, which generally causes very high tides in the ocean, a fact of which our men were not aware."

Indeed, we may well believe that a night of full moon and an unusually high tide would be a mystery to those chil-

dren of the Mediterranean. Their ships had been beached and were lying high and dry when the rapidly rising tide overwhelmed them. Cables were broken, anchors lost, panic ensued.

But Cæsar's glory lay in overcoming obstacles, and it is well known how he got his troops and ships safely back across the Channel, and how preparations were hurried on in Gaul for a second invasion of Britain.

Cæsar's remarks on this new-found land are interesting for us to-day. He tells us of "a river called the Thames, about eight miles from the sea." "The interior of Britain," he says, "is inhabited by a people who, according to tradition, are aboriginal. The population is immense; homesteads closely resembling those of the Gauls are met with at every turn, and cattle are very numerous. Gold coins are in use, or iron bars of fixed weight. Hares, fowls, and geese they think it wrong to taste; but they keep them for pastime or amusement. The climate is more equable than in Gaul, the cold being less severe. The island is triangular in shape, one side being opposite Gaul. One corner of this side, by Kent—the landing-place for almost all ships from Gaul—has an easterly, and the lower one a westerly, aspect. The extent of this side is about five hundred miles. The second trends off toward Spain. Off the coast here is Ireland, which is considered only half as large as Britain. Halfway across is an island called Man, and several smaller islands also are believed to be situated opposite this coast, in which there is continuous night for thirty days. The length of this side is eight hundred miles. Thus the whole island is two thousand miles in circumference. The people of the interior do not, for the most part, cultivate grain, but live on milk and flesh-meat, and clothe themselves with skins. All Britons, without exception, stain themselves with woad, which produces a bluish tint. They wear their hair long."

Cæsar crossed the Thames. "The river can only be forded at one spot," he tells us, "and there with difficulty." Farther he did not go. And so this is all that was known of Britain for many a long year to come.

THE VIKINGS SAIL THE NORTHERN SEAS

A VERY interesting type of adventurers now claims our attention, and we turn to the frozen north, to the wild region at the back of the north wind, for new activity and discovery. Out of this land of fable and myth, legend and poetry, the fierce inhabitants of Scandinavia begin to take shape. Tacitus speaks of them as "mighty in fame," Ptolemy as "savage and clothed in the skins of wild beasts."

From time to time we have glimpses of these folk sailing about in the Baltic Sea. They were known to the Finns of the north as "sea-rovers." "The sea is their school of war and the storm their friend; they are sea-wolves that live on the pillage of the world," sang an old Roman long years ago. The daring spirit of their race had already attracted the attention of Britons across the seas. The careless glee with which they seized either sword or oar and waged war with the stormy seas for a scanty livelihood, raiding all the neighboring coasts, had earned them the name of Vikings, or creek men. Their black-sailed ships stood high out of the water, prow and stern ending in the head and tail of some strange animal. Their long beards, their loose shirts, and their battle-axes made them conspicuous. "From the fury of the Northmen save us, Lord," prayed those who had come in contact with these Vikings.

In the ninth century they spring into fame as explorers by the discovery of Iceland. It was in this wise. The chief of a band of pirates, one Naddod, during a voyage to the Faroe Islands was driven by a storm upon the eastern coast of an unknown land. Not a soul was to be seen. He climbed a high mountain covered with snow and took a look round, but though he could see far and wide, not a human being could

he detect. So he named it Snow-land and sailed home to relate his adventures.

A few years later another Viking, Gardar, bound for the west coast of Scotland, was likewise blown by a storm on to the coast of Snow-land. He sailed right round and found it to be an island. Considering that it was unsafe to navigate the icy northern seas in winter, he built himself a hut on the island, lived there till the spring, and returned home. His account of the island fired the enthusiasm of an old Viking called Floki, who sailed away, meaning to take possession of the newly discovered country. At the Faroe Islands he let fly three ravens. The first returned, the second came back to the ship, the third guided the navigator to the island that he sought. He met a quantity of drift-ice about the northern part of the island and called it Ice-land, the name it has borne ever since. But amid the arctic ice he spent a desolate winter; the island seemed full of lofty mountains covered with eternal snow. His companions, however, were delighted with the climate and the soil.

"Milk drops from every plant, and butter from every twig," they said; "this was a land where men might live free from the tyranny of kings." Free, indeed, for the island was totally uninhabited.

Iceland soon became a refuge for pirates and other lawless characters. Among these was a young Viking called Erik the Red. He was too lawless even for Iceland, and, being banished for three years, he sailed away in the year 985 in search of new lands. At the end of his three years he returned and reported that he had discovered land with rich meadows, fine woods, and good fishing, which he had named Greenland. So glowing was his description that soon a party of men and women, with household goods and cattle, started forth in twenty-five ships to colonize the new land. Still the passion for discovery continued, and Erik's son Leif fitted out a vessel to carry thirty-five men in quest of land already sighted to the west.

It was in the year 1000 that they reached the coast of North America. It was a barren and rocky shore to which

THEY CAME TO ANCHOR AND WENT ASHORE.

Leif gave the name of Rock-land. Sailing farther, they found a low coast wooded to its edge, to which they gave the simple name of Woody-land. Two days later an island appeared, and on the mainland they discovered a river up which they sailed. On low bushes by the banks of the river they found sweet berries or wild grapes from which a sort of wine was made, so Leif called the land Vin-land. It is now supposed that Vinland and Woodyland are really Newfoundland and Labrador on the shores of North America. After this, shipload followed shipload from Iceland to colonize Vinland, but without success.

So the Viking discoveries in these cold and inhospitable regions were but transitory. The clouds lifted but for a moment to settle down again over America, till it was rediscovered some five hundred years later.

Before leaving these northern explorers, let us remind ourselves of the old saga so graphic in its description of their ocean lives:

"Down the fiord sweep wind and rain;
Our sails and tackle sway and strain;
Wet to the skin
We're sound within.
Our sea-steed through the foam goes prancing,
While shields and spears and helms are glancing.
From fiord to sea,
Our ships ride free,
And down the wind with swelling sail
We scud before the gathering gale."

Now, while these fierce old Vikings were navigating unknown seas, Alfred the Great was reigning over England. Among his many and varied affairs, he was deeply interested in the geography of the world. He was always ready to listen to those who had been on voyages of discovery, and in his account of the geography of Europe he tells us of a famous old sea-captain called Othere, who had navigated the unknown seas to the north of Europe.

"Othere told his lord, King Alfred, that he dwelt northmost of all Northmen, on the land by the western sea. He said that the land is very long thence to the north; but it is all waste save that in a few places here and there Finns reside.

He said that he wished to find out how far the land lay right north, or whether any man dwelt to the north of the waste. Then he went right north near the land, and he left all the way the waste land on the right and the wide sea on the left for three days. There was he as far north as the whale-hunters ever go. He then went yet right north, as far as he could sail in the next three days. After sailing for another nine days he came to a great river; they turned up into the river, but they durst not sail beyond it on account of hostility, for the land was all inhabited on the other side. He had not before met with any inhabited land since he came from his own home, for the land was uninhabited all the way on his right save by fishermen, hunters, and fowlers, and they were all Finns, and there was always a wide sea on his left."

And as a trophy of distant lands and a proof of his having reached farthest north, Othere presented the King with a "snow-white walrus-tooth."

But King Alfred wanted his subjects to know more of the world around them, and even in the midst of his busy life he managed to write a book in Anglo-Saxon that sums up for us the world's knowledge some nine hundred years after Ptolemy—nine hundred barren years so far as geographical progress was concerned. Alfred does not even allude to Iceland, Greenland, or Vinland. The news of these discoveries had evidently not reached him. He repeats the old legend of Thule to the northwest of Ireland, "which is known to few, on account of its very great distance."

So ends our story of the brief but thrilling discoveries of the Northmen, who knew not fear, and we turn again to landsmen and the east.

TRAVELERS TO THE EAST

WHILE the Vikings tossed fearlessly about on wild northern seas, Arab wayfarers rode eastward by well-known caravan tracks, trading and teaching the religion of Mohammed. Out of such travels came the famous romance of "Sindbad the Sailor." The "Arabian Nights" is filled with tales based on the adventures of these travelers.

One of the Arab travelers of the tenth century, named Masudi, left his home at Bagdad when he was very young, and he appears to have penetrated into every Mohammedan country from Spain to Farther India. In his famous "Meadows of Gold," with its one hundred and thirty-two chapters, dedicated to "the most illustrious Kings," he describes the various lands through which he has traveled, giving us at the same time a good deal of incorrect information about lands he never has seen.

> "I have gone so far toward the setting sun
> That I have lost all remembrance of the East,
> And my course has taken me so far toward the rising sun
> That I have forgotten the very name of West."

One cannot but look with admiration on this energetic traveler, when one remembers the labor of travel even in the tenth century. There were the long, hot rides through Central Asia, under a burning sun, the ascent of unknown mountains, the crossing of unbridged rivers. Though he had "gone so far toward the setting sun," his knowledge of the West was very limited, and while Vikings sailed the Atlantic westward, Masudi tells us that it is "impossible to navigate beyond the Pillars of Hercules, for no vessel sails on that sea; it is without cultivation or inhabitant, and its end, like its depth, is unknown." Such was the "Green Sea of Darkness," as it was called by the Arabs. Masudi is more at home when

he journeys east toward the rising sun, but his descriptions of China, the "Flowery Land," the "Celestial Country," were to be excelled by others.

We must pass over Edrisi, who in 1153 wrote on "The going abroad of a curious Man to explore all the Wonders of the World," which wonders he explored very imperfectly, though he has left us a map of the world, which may be seen to-day in the Bodleian Library at Oxford.

But we cannot pass over Benjamin of Tudela in so few words. "Our Benjamin" he is called by Pinkerton, who in the eighteenth century made a wonderful collection of voyages and travels of all ages. "Our Benjamin" was a Jew hailing from Tudela in France, and he started forth on his travels with a view to ascertaining the condition and numbers of Jews living in the midst of the great Mohammedan Empire. Benjamin made his way in 1160 to the "exceeding great city" of Constantinople, which "hath none to compare with it except Bagdad—the mighty city of the Arabs." With the great temple of St. Sophia and its pillars of gold and silver, he was immensely struck. In wrapt admiration he gazed at the Emperor's palace with its walls of beaten gold, its hanging crown suspended over the Imperial throne, blazing with precious stones, so splendid that the hall needed no other light. No less striking were the crimson embroidered garments worn by the Greeks, who rode to and from the city on horseback like princes. Benjamin turns sadly to the Jewish quarter. No Jew might ride on horseback here. All were treated as objects of contempt; they were herded together, often beaten in the streets.

From the wealth and luxury of Constantinople Benjamin makes his way to Syria. At Jerusalem he finds some two hundred Jews commanding the dyeing trade. And here we must remind ourselves that the second Crusade was over and the third had not yet taken place; that Jerusalem, the City of Peace, had been in the hands of the Mohammedans or Saracens till 1099, when it fell into the hands of the Crusaders. From Jerusalem, by way of Damascus, Benjamin entered Persia, and he gives us an interesting account of

Bagdad and its Califs. The Calif was the head of the Mohammedans in the same way that the Pope was the head of the Christians. "He was," says "Our Benjamin," "a very dignified personage, friendly toward the Jews, a kind-hearted man, but never to be seen." Pilgrims from distant lands, passing through Bagdad on their way to Mecca, prayed to be allowed to see "the brightness of his face," but they were only allowed to kiss one end of his garment. Now, although Benjamin describes the journey from Bagdad to China, it is very doubtful if he ever got to China himself; so we will leave him delighting in the glories of Bagdad, with its palm-trees, its gardens and orchards, and rejoicing in the statistics of Jews; and we will turn to the adventures of one, Carpini, who really did reach Tartary.

This Carpini, or Friar John, was a Franciscan who was chosen by the Pope to go to the Great Khan of the Mongol Empire, which was threatening to overrun Christendom. On April 16, 1245, Friar John left the cloister for the unknown tract of country by which he had to pass into China. By way of Bohemia he entered Russia, and, having annexed Brother Benedict in Poland and Brother Stephen in Bohemia, together with a guide, Carpini made his way eastward. It was midwinter; the travelers had to ride on Tartar horses, "for they alone could find grass under the snow, or live, as animals must in Tartary, without hay or straw." Sometimes Friar John fell so ill that he had to be placed in a cart and carried through the deep snow.

It was Easter, 1246, just a year after their start, that Friar John and his companions began the last section of their journey beyond the Volga, and "most tearfully" set out, not knowing whether it was for life or for death. So thin had they all become that not one of them could ride. Still they toiled on, till one July day they entered Mongolia and found the headquarters of the Great Khan about half a day's journey from Karakoram. They arrived in time to witness the enthronement of the new Khan in August. Here were crowds of ambassadors from Russia and Persia as well as from outlying parts of the growing Mongol Empire. These were

laden with gifts—indeed, there were no less than five hundred crates full of silks, satins, brocades, fur, gold embroidery. Friar John and his companions had no gifts to offer save the letter from the Pope.

Impressive, indeed, in the eyes of the once cloistered friar must have been this first sight of Eastern splendor. High on a neighboring hill stood the Khan's tent, resting on pillars plated with gold, top and sides covered with silk brocades, while the great ceremony took place. But the men of the West were not welcomed by the new Emperor of the East. It was supposed that he intended shortly to unfurl his standard against the whole of the Western world; and in November Friar John and his companions found themselves formally dismissed with a missive from the Great Khan to the Pope, signed and sealed by the Khan himself.

The return journey was even more trying; winter was coming on, and for nearly seven months the Pope's faithful envoys struggled on across the endless open plains of Asia toward Russia, resting their eyes on vast expanses of snow. At last they reached home, and Friar John wrote his "Book of the Tartars," in which he informs us that Mongolia is in the east part of the world and that Cathay is "a country in the east of Asia." To the southwest of Mongolia he heard of a vast desert, where lived certain wild men unable to speak, and with no joints in their legs. These occupy themselves in making felt out of camel's hair for garments to protect them from the weather.

Again Carpini tells us about that mythical character figuring in the travel-books of this time—Prester John. "The Mongol army," he says, "marched against the Christians dwelling in the greater India, and the king of that country, known by the name of Prester John, came forth with his army to meet them. This Prester John caused a number of hollow copper figures to be made, resembling men, which were stuffed with combustibles and set upon horses, each having a man behind on the horse, with a pair of bellows to stir up the fire. At the first onset of the battle these mounted figures were sent forward to the charge; the men who rode

behind them set fire to the combustibles and then strongly blew with the bellows; immediately the Mongol horses and men were burned with wildfire and the air was darkened with smoke."

Within a few years of the return of Friar John, another Franciscan friar, William de Rubruquis, was sent forth, this time by the French king, Louis, to carry letters to the Great Khan begging him to embrace Christianity and acknowledge the supremacy of the Pope. William and his chosen companions had a painful and difficult journey of some months before they reached the camps on the Volga of one of the great Mongol lords. Indeed, "if it had not been for the grace of God and the biscuit which we brought with us, we had surely perished," remarks the pious friar in the history of his adventures. Never once did they enjoy the shelter of a house or tent, but passed the nights in the open air in a cart. At last they were ordered to appear at the court of the great ruler with all their books and vestments.

"We were commanded to array ourselves in our sacred vestments to appear before the prince. Putting on, therefore, our most precious ornaments, I took a cushion in my arms, together with the Bible I had from the King of France and the beautiful Psalter which the Queen bestowed upon me: my companion at the same time carried the missal and a crucifix; and the clerk, clothed in his surplice, bore a censer in his hand. In this order we presented ourselves . . . singing the Salve Regina." It is a strange picture this—the European friars, in all the vestments of their religion, standing before the Eastern prince of this far-off country. They would fain have carried home news of his conversion, but they were told in angry tones that the prince was "not a Christian, but a Mongol."

They were dismissed with orders to visit the Great Khan at Karakoram. Resuming their journey early in August, the messengers arrived at the court of the Great Khan the day after Christmas. They were miserably housed in a tiny hut with scarcely room for their beds and baggage. The cold was intense. The bare feet of the friars caused great aston-

ishment to the crowds of onlookers, who stared at the strange figures as though they had been monsters. However, they could not keep their feet bare long, for very soon Rubruquis found that his toes were frozen.

Chanting in Latin the hymn of the Nativity, the visitors were at last admitted to the Imperial tent, hung about with cloth of gold, where they found the Khan. He was seated on a couch—a "little man of moderate height, aged about forty-five, and dressed in a skin spotted and glossy like a seal." The Mongol Emperor asked numerous questions about the kingdom of France and the possibility of conquering it, to the righteous indignation of the friars. They stayed in the country till the end of May, when they were dismissed, having failed in their mission, but having gained a good deal of information about the great Mongol Empire and its somewhat mysterious ruler.

But while the kingdoms in Europe trembled before the growing expansion of the Mongol Empire and the dangers of Tartar hordes, the merchants of Venice rejoiced in the new markets which were opening for them in the East.

MARCO POLO

VENICE, in the thirteenth century, was full of enterprising merchants such as we hear of in Shakespeare's "Merchant of Venice." Among them were two Venetians, the brothers Polo. Rumors had reached them of the wealth of the mysterious land of Cathay, of the Great Khan, of Europeans making their way through barren wildernesses, across burning deserts in the face of hardships indescribable, to open up a highway to the Far East.

So off started Maffeo and Nicolo Polo on a trading enterprise. Having crossed the Mediterranean, they came, "with a fair wind and the blessing of God," to Constantinople, where they disposed of a large quantity of their merchandise. Having made some money, they directed their way to Bokhara, where they fell in with a Tartar nobleman, who persuaded them to accompany him to the court of the Great Khan. Ready for adventure, they agreed, and he led them in a northeasterly direction. They were delayed by heavy snows, and by the swelling of unbridged rivers, so that it was a year before they reached Peking, which they considered was the extremity of the East. They were courteously received by the Great Khan, who questioned them closely about their own land, to which they replied in the Tartar language, which they had learned on the way.

Now since the days of Friar John there was a new Khan named Kublai, who wished to send messengers to the Pope to beg him to send a hundred wise men to teach Christianity to the Chinese. He chose the Polo brothers as his envoys to the Pope, and they started off to fulfil his behests. After an absence of fifteen years, they were again in Venice. The very year they had left home, Nicolo's wife had died, leaving

a boy, born in the same year, who was to become the famous traveler Marco Polo.

The stories told by his father and uncle of the Far East and the court of the greatest Emperor on earth filled the boy of fifteen with enthusiasm, and when in 1271 the brothers Polo set out for their second journey to China they were accompanied by the young Marco. They also took with them two preaching friars to teach the Christian faith to Kublai Khan.

Their journey lay through Armenia, through the old city of Nineveh to Bagdad, where the last Calif had been butchered by the Tartars. Entering Persia as traders, the Polo family passed on to Ormuz, hoping to take ship from there to China; but for some unknown reason this was impossible, and the travelers made their way northeast to the country about the sources of the river Oxus. Here young Marco fell sick of a low fever, and for a whole year they could not proceed. Resuming their journey at last, "in high spirits," they crossed the great highlands of the Pamirs, known as the "roof of the world," and, descending on Khotan, found themselves face to face with the great Gobi Desert. For thirty days they journeyed over the sandy wastes of the silent wilderness, till they came to a city in the province of Tangut, where they were met by messengers from the Khan, who had heard of their approach. But it was not till May, 1275, that they actually reached the court of Kublai Khan after their tremendous journey of "one thousand days." The preaching friars had long since turned homeward, alarmed at the dangers of the way, so only the three stout-hearted Polos were left to deliver the Pope's message to the ruler of the Mongol Empire.

"The lord of all the earth," as he was called by his people, received them very warmly. He inquired at once who was the young man with them.

"My lord," replied Nicolo, "he is my son and your servant."

"Then," said the Khan, "he is welcome. I am much pleased with him."

So the three Venetians abode at the court of Kublai Khan.

His summer place was at Shang-tu, called Xanadu by the poet Coleridge:

> "In Xanadu did Kublai Khan
> A stately pleasure-dome decree,
> Where Alph, the sacred river, ran
> Through caverns measureless to man
> Down to a sunless sea."

The Venetians remained at the court for seventeen years. Young Marco displayed such intelligence that he was sent on a mission for the Khan some six months' journey distant; and so well did he describe the things he had seen and the lands through which he had passed, that the Khan heaped on him honors and riches. Here is Marco's description of his lord and master:

"The Great Khan, lord of lords, named Kublai, is of middle stature, neither too full nor too short: he has a beautiful fresh complexion, his color is fair, his eyes dark."

The capital of the Empire, Peking, the residence of the court during the months of December, January, and February, called out the unbounded enthusiasm of the Polos. The city, two days' journey from the ocean, in the extreme northeast of Cathay (China), had been newly rebuilt in a regular square, six miles on each side, surrounded by walls of earth and having twelve gates.

"The streets are so broad and so straight," says Marco, "that from one gate another is visible. It contains many beautiful houses and palaces, and a very large one in the midst, containing a steeple with a large bell which at night sounds three times, after which no man must leave the city. At each gate a thousand men keep guard, not from dread of any enemy, but in reverence of the monarch who dwells within it, and to prevent injury by robbers."

This square form of Peking, the great breadth of the straight streets, the closing of the gates by sound of a bell—the largest in the world—is noted by all travelers to this famous city of Cathay.

But greater even than Peking was the city of Kin-sai (Hangchau-fu), the City of Heaven, in the south of China. It had but lately fallen into the hands of Kublai Khan.

"And now I will tell you all its nobleness," says Marco, "for without doubt it is the largest city in the world. The city is one hundred miles in circumference and has twelve thousand stone bridges, and beneath the greater part of these a large ship might pass. And you need not wonder there are so many bridges, because the city is wholly on the water and surrounded by it like Venice. The merchants are so numerous and so rich that their wealth can neither be told nor believed. They and their ladies do nothing with their own hands, but live as delicately as if they were kings. These females also are of most angelic beauty, and live in the most elegant manner. The people are idolaters, subject to the Great Khan, and use paper money. They eat the flesh of dogs and other beasts, such as no Christian would touch for the world. In this city, too, are four thousand baths, in which the citizens, both men and women, take great delight and frequently resort thither, because they keep their persons very cleanly. They are the largest and most beautiful baths in the world, insomuch that one hundred of either sex may bathe in them at once. Twenty-five miles from thence is the ocean, and there is a city (Ning-po) which has a very fine port, with large ships and much merchandise of immense value from India and other quarters."

But though Marco revels in the description of wonderful cities, he is continually leading us back to the Great Khan himself. His festivals were splendid. The tables were arranged so that the Emperor sat higher than all the others, always with his face to the south. His sons and daughters were placed so that their heads were on a level with his feet. Some forty thousand people feast on these occasions, but the Khan himself is served only by his great barons, their mouths wrapped in towels (embroidered in gold and silver), that their breath might not blow upon the plates. His presents were on a colossal scale; it was no rare occurrence for him to receive five thousand camels, one hundred thousand beautiful horses, and five thousand elephants covered with cloth of gold and silver.

"And now I will relate a wonderful thing," says Marco.

"A large lion is led into his presence, which, as soon as it sees him, drops down and makes a sign of deep humility, owning him its lord and moving about without any chain."

His kingdom was ruled by twelve barons all living at Peking. His provinces numbered thirty-four, and their method of communication was very complete.

"Messengers are sent to divers provinces," says Marco, "and on all the roads they find at every twenty-five miles a post, where the messengers are received. At each is a large edifice containing a bed covered with silk and everything useful and convenient for a traveler . . . here, too, they find full four hundred horses, whom the prince has ordered to be always in waiting to convey them along the principal roads. . . . Thus they go through the provinces, finding everywhere inns and horses for their reception. Moreover, in the intervals between these stations, at every three miles are erected villages of about forty houses inhabited by foot-runners also employed on these dispatches. They wear large girdles set round with bells, which are heard at a great distance. Receiving a letter or packet, one runs full speed to the next village, when, his approach being announced by bells, another is ready to start and proceed to the next, and so on. By these pedestrian messengers the Khan receives news in one day and night from places ten days' journey distant; in two days from those twenty off, and in ten from those a hundred days' journey distant. Thus he sends his messengers through all his kingdoms and provinces to know if any of his subjects have had their crops injured by bad weather; and, if any such injury has happened, he does not exact from them any tribute for that season—nay, he gives them corn out of his own stores to subsist on."

This first European account of China is all so delightful that it is difficult to know where to stop. The mention of coal is interesting. "Throughout the whole province of Cathay," says Marco, "are a kind of black stones cut from the mountains in veins, which burn like logs. They maintain the fire better than wood. If you put them on in the evening they will preserve it the whole night, and it will be found burning

in the morning. Throughout the whole of Cathay this fuel is used. They have also wood, but the stones are much less expensive."

Neither can we pass over Marco's account of the wonderful stone bridge, with its twenty-four arches of pure marble, across the broad river, "the most magnificent object in the whole world," across which ten horsemen could ride abreast; nor the Yellow River (Hoangho), "so large and broad that it cannot be crossed by a bridge, and flows on even to the ocean"; nor the wealth of mulberry-trees throughout the land, on which lived the silkworms that have made China so famous for her silk.

Then there are the people famous for their manufacture of fine porcelain ware. "Great quantities of porcelain earth were here collected into heaps and in this way exposed to the action of the atmosphere for some forty years, during which time it was never disturbed. By this process it became refined and fitted for manufacture." Such is Marco's only reference to china ware. With regard to tea he is entirely silent. But he is the first European to tell us about the islands of Japan, fifteen hundred miles from the coast of China, now first discovered to the geographers of the West.

"Zipangu," says Marco, "is an island situated at a distance from the mainland. The people are fair and civilized in their manners—they possess precious metals in extraordinary abundance. The people are white, of gentle manners, idolaters in religion, under a king of their own. These folk were attacked by the fleet of Kublai Khan in 1264 for their gold, for the King's house, windows, and floors were covered with it, but the King allowed no exportation of it."

Thus Marco Polo records in dim outline the existence of land beyond that ever dreamed of by Europeans—indeed, denied by Ptolemy and other geographers of the West. In the course of his service under Kublai Khan he opened up the eight provinces of Tibet, the whole of southeast Asia from Canton to Bengal, and the archipelago of Farther India. He tells us, too, of Tibet, that wide country "vanquished and wasted by the Khan for the space of twenty days' journey"—

a great wilderness wanting people, but overrun by wild beasts. Here were great Tibetan dogs as large as asses. Still on duty for Kublai Khan, Marco reached Bengal, "which borders upon India." But he was glad enough to return to his adopted Chinese home, "the richest and most famous country of all the East."

At last the Polo family wearied of court honors, and they were anxious to return to their own people at Venice. However, the Khan was very unwilling to let them go. One day their chance came. The Persian ruler wished to marry a princess of the house of Kublai Khan, and it was decided to send the lady by sea under the protection of the trusted Polos, rather than to allow her to undergo the hardships of an overland journey from China to Persia.

So in the year 1292 they bade farewell to the great Kublai Khan, and with the little princess of seventeen and her suite they set sail with an escort of fourteen ships for India. Passing many islands "with gold and much trade," after three months at sea they reached Java, at this time supposed to be the greatest island in the world, above three thousand miles round. At Sumatra they were detained five months by stress of weather, till at last they reached the Bay of Bengal. Sailing on a thousand miles westward, they reached Ceylon—"the finest island in the world," remarks Marco. It was not till two years after their start and the loss of six hundred sailors that they arrived at their destination, only to find that the ruler of Persia was dead. They gave the little bride to his son, and passed on by Constantinople to Venice, where they arrived in 1295.

And now comes a strange sequel to the story. After the long absence of the travelers, and in their travel-stained garments, their friends and relations could not recognize them, and in vain did they declare that they were indeed the Polos—father, son, and uncle—who had left Venice twenty-four long years ago. No one believed their story. So this is what they did. They arranged for a great banquet, to which they invited all their relations and friends. This they attended in robes of crimson satin. Then suddenly Marco rose from the table

and, going out of the room, returned with the coarse, travel-stained garments. They ripped open seams, tore out the lining, and a quantity of precious stones, rubies, sapphires, diamonds, and emeralds poured forth. The company were filled with wonder, and when the story spread, all the people of Venice came forth to do honor to their famous fellow-countrymen.

Marco was surnamed "Marco of the Millions." He never tired of telling the wonderful stories of Kublai Khan, the great Emperor who combined the "rude magnificence of the desert with the pomp and elegance of the most civilized empire in the Old World."

COLUMBUS: HIS FIRST VOYAGE

EVERY event in the life of Christopher Columbus is of great interest. We recall his birth and early life at Genoa toward the middle of the fifteenth century, his apprenticeship to his father as a weaver of cloth, his devotion to the sea, his love of the little sailing ships that passed in and out of the busy Genoese harbor from all parts of the known world. At the age of fourteen the little Christopher went to sea—a red-haired, sunburnt boy with bright blue eyes. He learned the art of navigation, he saw foreign countries, he learned to chart the seas, to draw maps, and possibly worked with some of the noted Italian draughtsmen. At the age of about twenty-eight (in 1474), he left Genoa for Portugal, famous throughout the world for her recent discoveries under the leadership of Prince Henry, who "awakened the slumbering world of travel and directed it to the high seas." He is called Henry the Navigator, and has been described as the "originator of modern discovery." Soon Portugal further increased her fame through the discoveries of Bartholomew Diaz, who was the first to round the Cape of Good Hope, the Stormy Cape, as he called it.

Columbus wanted to learn all he could about Portuguese discoveries; he made voyages to Guinea, Madeira, and Porto Santo. He also went to England and "sailed a hundred leagues to the island of Thule in 1477."

He was now a recognized seaman of distinction, with courteous manners and fine appearance. He set himself to study maps and charts at Lisbon, giving special attention to instruments for making observations at sea. For many years he had been revolving a scheme for reaching India by sailing westward instead of the route by Africa. The more he

studied these things the more convinced he became that he was right.

> "What if wise men had, as far back as Ptolemy,
> Judged that the earth like an orange was round.
> None of them ever said, 'Come along, follow me,
> Sail to the West and the East will be found.'"

It was not till the year 1480 that Columbus proposed to the King of Portugal his idea of sailing westward. He explained his reasons: how there were grounds for thinking there was an unknown land to the west; how artistically sculptured pieces of wood had been driven across the ocean by the west wind, suggesting islands not yet discovered; how once the corpses of two men with broad faces, unlike Europeans, had been washed ashore; how on the west coast of Ireland seeds of tropical plants had been discovered.

The King listened and was inclined to believe Columbus. But his councilors persuaded him to get from the Genoese navigator his plans, and while they kept Columbus waiting for the King's answer they sent off some ships privately to investigate the whole matter. The ships started westward, encountered a great storm, and returned to Lisbon, scoffing at the scheme of the stranger. When this news reached his ears, Columbus was very angry. He would have nothing more to do with Portugal, but left that country at once for Spain to appeal to the King and Queen of that land.

Ferdinand and Isabella were busy with affairs of state and could not give audience to the man who was to discover a new world. It was not till 1491 that he was summoned before the King and Queen. Once more his wild scheme was laughed at, and he was dismissed from the court. Not only was he again indignant, but his friends were indignant too. They believed in him, and would not rest till they had persuaded the Queen to take up his cause. He demanded a good deal. He must be made admiral and viceroy of all the new seas and lands he might discover, and must receive a large portion of his gains.

The Queen was prevailed on to furnish means for the expedition, and she became so enthusiastic over it that she

declared she would sell her own jewels to provide the necessary supplies. Columbus was created Admiral of the Ocean in all the islands and continents he might discover; two little ships were made ready, and it seemed as though the dream of his life might be fulfilled. The explorer was now forty-six; his red hair had become gray with waiting and watching for the possibility of realizing his great scheme.

At last the preparations were complete. The "Santa Maria" was to lead the way with the Admiral on board; she was but one hundred tons burden, with a high poop and a forecastle. It had been difficult enough to find a crew; men were shy about venturing with this stranger from Genoa on unknown seas, and it was a motley party that finally took service under Columbus. The second ship, the "Pinta," was but half the size of the flagship; she had a crew of eighteen and was the fastest sailer of the little squadron, while the third, the "Niña" of forty tons, also carried eighteen men.

On August 3, 1492, the little fleet sailed forth from Spain on a quest more perilous perhaps than any yet on record. No longer could they sail along with a coast always in sight; day after day and night after night they must sail on an unknown sea in search of an unknown land. No one ever expected to see them again. Well has it been said that, "looking back at all that has grown out of it in the four centuries that have elapsed, we now know that the sailing of those three little boats over the bar was, since the Fall of Rome, the most momentous event in the world's history." The ships steered for the Canary Islands, and it was not till the 9th of September that the last land faded from the eyes of that daring little company.

Something of a panic among the sailors ensued when they realized their helpless position; some even burst into tears, begging to be taken home. The days passed on. By the 16th they had come within the influence of the trade winds.

"The weather was like April," says Columbus in his journal. Still westward they sailed, eagerly looking for signs of land. Now they see two pelicans, "an indication that land is

near"; now a large dark cloud to the north, another "sign that land is near."

As the days passed, their hopes died away, and "the temper of the crews was getting uglier and uglier as the three little vessels forged westward through the blue weed-strewn waters." On October 9 hope revives; all night they hear birds passing through the still air.

On the evening of the 11th a light was seen glimmering in the distance; from the high stern deck of the "Santa Maria" it could be plainly seen. And when the sun rose on that memorable next morning, the low shores of land a few miles distant came clearly into view.

"Seabirds are wheeling overhead heedless of the intruders, but on the shore human beings are assembling to watch the strange birds which now spread their wings and sail toward the island. The 'Pinta' leads, and her crew are raising the Te Deum. The crews of the 'Santa Maria' and the 'Niña' join in the solemn chant, and many rough men brush away tears. Columbus, the two Pinzons [commanders of the "Pinta" and the "Niña"], and some of the men step into the cutter and row to the shore."

Columbus, fully armed under his scarlet cloak, sprang ashore, the unclothed natives fleeing away at sight of the first white man they ever looked upon. Then, unfurling the royal standard of Spain and setting up a large cross, the great navigator fell on his knees and gave thanks to God for this triumphant ending to his perilous voyage. The land upon which he first set foot in the New World is the island that was called by the natives Guanahani. Columbus named it San Salvador, and formally took possession of it for Spain. It is one of the Bahama group, and is now known as Watling Island (British).

"Thus was the mighty enterprise achieved, mighty in its conception, still more important in its results."

But Columbus thought he had discovered the Indies, a new route to the East and the Cathay of Marco Polo. He had done more than this; he had discovered another continent.

COLUMBUS TAKING POSSESSION OF SAN SALVADOR FOR SPAIN.

He had sailed almost three thousand miles without seeing land, a feat that was unparalleled in the previous history of discovery.

He made friends with the natives. "I believe they would easily become Christians," wrote Columbus. "If it please our Lord at the time of my departure, I will take six from here that they may learn to speak." He also notes that they will make good slaves.

From island to island he now made his way, guided by natives. He hoped to find gold; he hoped to find Cathay, for he had a letter from Ferdinand and Isabella to deliver to the Great Khan. The charm and beauty of these enchanted islands were a source of joy to the explorer: "The singing of the little birds is such that it appears a man would wish never to leave here, and the flocks of parrots obscure the sun." The island of Cuba "seemed like heaven itself." But Columbus could not forget that he was searching for gold, for Oriental spices, for the land of Marco Polo, as he hastened from point to point, from island to island. Already the "Pinta" under Martin Pinzon had gone off independently in search of a vague land of gold, to the vexation of the Admiral. A worse thing was now to befall him. On Christmas day, off the island of Hispaniola (Haïti), the "Santa Maria" struck upon a reef and went over. Columbus and his crew escaped on board the little "Niña." But she was too small to carry home the double crew, and Columbus made a little fortress on the island, where the native king was friendly, and left there a little colony of Spaniards.

He now prepared for the homeward voyage, and one January day in 1493 he left the newly discovered islands and set his face for home in company with the "Pinta," which by this time had returned to him. For some weeks they got on fairly well. Then the wind rose. A violent storm came on; the sea was terrible, the waves breaking right over the little homeward-bound ships, which tossed about helplessly for long days and nights. Suddenly the "Pinta" disappeared. The wind and sea increased. The little forty-ton "Niña" was in extreme peril, and the crew gave themselves up for lost;

their provisions were nearly gone. Columbus was agonized lest he should perish and the news of his great discovery should never reach Spain. Taking a piece of parchment, he noted down as best he could amid the tossing of the ship a brief account of his work, and wrapping it in a waxed cloth, he put it in an empty cask and threw it overboard. Then, while the mountainous seas threatened momentary destruction, he waited and prayed.

Slowly the storm abated, and on February 18 Columbus reached the Azores. A few days for refreshment, and on he sailed again, feverishly anxious to reach Spain and proclaim his great news. But on March 3 the wind again rose to a hurricane and death stared the crew in the face. Still, "under bare poles and in a heavy cross-sea," they scudded on, until they reached the mouth of the Tagus. The news of his arrival soon spread, and excited crowds hurried to see the little ship that had crossed the fierce Atlantic. Bartholomew Diaz came aboard the "Niña," and for a short time the two greatest explorers of their century were together. An enthusiastic welcome awaited Columbus in Spain; was he not "Admiral of the Ocean, Viceroy of the Western Indies," the only man who had crossed the unknown for the sake of a cherished dream?

"Seven months had passed since Columbus had sailed from Spain in the dim light of that summer morning. Now he was back. Through tempestuous seas and raging winter gales he had guided his ship well, and Spain knew how to do him honor. His journey from the coast to the court was like a royal progress. The roads were lined with excited people; the air was rent with shouts of joy."

On Palm Sunday, 1493, he passed through the streets of Seville. A procession preceded him in which walked the six natives, or Indians as they were called, brought home by Columbus; parrots and other birds with strange and radiant coloring were also borne before the triumphant explorer, who himself rode on horseback among the mounted chivalry of Spain. From windows and roofs a dense throng watched Christopher Columbus as he rode through the streets of Seville.

From here he passed on to Barcelona, to be received by the King and Queen.

"The city decked herself
To meet me, roar'd my name: the King, the Queen,
Bade me be seated, speak, and tell them all
The story of my voyage, and while I spoke
The crowd's roar fell as at the 'Peace, be still.'
And when I ceased to speak, the King, the Queen,
Sank from their thrones, and melted into tears,
And knelt, and lifted hand and heart and voice
In praise to God who led me thro' the waste.
And then the great 'Laudamus' rose to heaven."

It is curious to think what a strange mistake caused all their rejoicing. Not only Spain, but the whole civilized world firmly believed that Columbus had discovered some islands off the coast of Asia, not far from the land of the Great Khan, in the Indian seas. Hence the islands were called the West Indies, and that name they have kept to this day.

COLUMBUS AND THE NEW WORLD

THE departure of Columbus six months later on his second voyage was a great contrast to the uncertain start of a year before. The new fleet was ready by September, 1493. The three largest ships, of some four hundred tons burden, were accompanied by fourteen smaller craft, and the crews numbered fifteen hundred men. There was no dearth of volunteers this time. High-born Spaniards, thirsting for the wealth of the Indies, offered their services, while Columbus took his brother James and a Benedictine monk chosen by the Pope. They took orange and lemon seeds for planting in the new islands, and horses, pigs, bulls, cows, sheep, and goats, besides fruit and vegetables.

So, full of hope and joyful expectation, they set sail; and so well had Columbus calculated his distance and direction, with but imperfect instruments at his disposal, that he arrived at the islands again on November 3. It was another new island, which he named Dominica, as the day was Sunday. Making for the island of Hispaniola (Haiti), where he had left his little Spanish colony, he passed many islands, naming Guadeloupe, San Martin, Santa Cruz, and others. Porto Rico was also found; but when they arrived at Hispaniola they could find no trace of Spaniards. Disaster had overtaken the colony, and the deserted men had been killed by the natives who had apparently been so friendly. Another spot was selected by Columbus, and a town was soon built, to which he gave the name of Isabella.

Taking three ships, provisioned for six months, with a crew of fifty-two, Columbus set out for the coast of Cathay. Instead of this, he found the island of Jamaica, with its low, hazy, blue coast of extreme beauty. Still convinced that he was near the territory of the Great Khan, he explored the

coast of Cuba, not realizing that it was an island. He sailed about among the islands, till he became very sick; fever seized him, and at last his men carried him ashore at Isabella, thinking that he must die. He recovered, but grieved to find a discontented colony, members of which had already sent back stories to Spain of the misdeeds of their founder. Columbus made up his mind to return to Spain to carry a true report of the difficulties of colonization in the Indies.

"It was June, 1496, before he found himself again in the harbor of Cadiz. People had crowded down to greet the great discoverer, but instead of a joyous crew, flushed with new success and rich with the spoils of the golden Indies, a feeble train of wretched men crawled on shore—thin, miserable, and ill. Columbus himself was dressed as a monk, in a long gown girded with a cord. His beard was long and unshaven. The whole man was utterly broken down with all he had been through."

But after a stay of two years in Spain, Columbus went off on his third voyage, with six ships. He now took a more southerly direction, hoping to find land to the south of the West Indies. And this he did, but he never lived to know that it was the great continent of South America. Through scorching heat, which melted the tar of their rigging, he and his men sailed onward till at last they were rewarded by the sight of land. Columbus had promised to dedicate the first land he saw to the Holy Trinity. What, then, was his surprise when land appeared from which arose three distinct peaks! He at once named it La Trinidad. The luxuriance of the island pleased the Spaniards, and as they made their way slowly along the shore their eyes rested for the first time, and unconsciously, on the mainland of South America. First appeared to the explorer a large island, and he called it Isla Santa. Here oysters abounded and "very large fish, and parrots as large as hens." Between the island and the mainland lay a narrow channel through which flowed a mighty current. While the ships were anchoring here a flood of fresh water came down with a great roar, nearly destroying the little Spanish ships and greatly alarming both Columbus

and his men. It was one of the mouths of the river Orinoco, to which they gave the name of the Dragon's Mouth. The danger over, they sailed on, charmed with the beautiful shores, the sight of the distant mountains, and the sweetness of the air.

Columbus decided that this must be the center of the earth's surface, and with its mighty rivers, surely, he thought, it was none other than the earthly Paradise with the rivers of the Garden of Eden, that "some of the Fathers had declared to be situated in the extreme east of the Old World, and in a region so high that the flood had not overwhelmed it." The world then, said Columbus, could not be a perfect round, but pear-shaped. With these conclusions he hastened across to Hispaniola, where his brother was ruling over the little colony in his absence. But treachery and mutiny had been at work. Matters had gone ill with the colony, and Columbus did not improve the situation by his presence. He was a brilliant navigator, but no statesman. Complaints reached Spain, and a Spaniard was sent out to replace Columbus. This high-handed official at once put the poor navigator in chains and placed him on board a ship bound for Spain.

Queen Isabella was overwhelmed with grief when the snowy-haired explorer once again stood before her, his face lined with suffering. He was restored to royal favor and provided with ships to sail on his fourth and last voyage. But his hardships and perils had told upon him, and he was not really fit to undertake the long voyage to the Indies. However, he arrived safely off the coast of Honduras and searched for the strait that he felt sure existed, but which was not to be found till some eighteen years later by Magellan. The natives brought him cocoanuts, which the Spaniards now tasted for the first time; they also brought from a far land merchandise denoting some high civilization. Columbus believed that he had reached the golden East, whence the gold had been obtained for Solomon's temple.

Had Columbus only sailed west he might have discovered Mexico with all its wealth, and "a succession of splendid discoveries would have shed fresh glory on his declining age,

instead of his sinking amidst gloom, neglect, and disappointment." At the Isthmus of Darien, Columbus gave up the search. He was weary of the bad weather. Incessant downpours of rain, storms of thunder and lightning, with terrific seas—these discouraged him. Disaster followed disaster. The food was nearly out; the biscuit "was so full of maggots that the people could only eat it in the dark, when they were not visible." Columbus himself seemed to be at the point of death. "Never," he wrote, "was the sea seen so high, so terrific, so covered with foam; the waters from heaven never ceased—it was like a repetition of the deluge."

He reached Spain in 1504 and was carried ashore on a litter. Then he learned that the Queen of Spain was dead. He was friendless, penniless, and sick unto death.

"After twenty years of toil and peril," he says pitifully, "I do not own a roof in Spain."

And so the brilliant navigator, Christopher Columbus, died all unconscious of the great New World he had reached. Four centuries have passed away, but

> "When shall the world forget
> The glory and the debt,
> Indomitable soul,
> Immortal Genoese?
> Not while the shrewd salt gale
> Whines amid shroud and sail,
> Above the rhythmic roll
> And thunder of the seas."

has been said that "injustice was not buried with Columbus"; and soon after his death an attempt was made, which finally succeeded, to name the New World after another—a Florentine pilot, Amerigo Vespucci.

It was but natural that, when the first discoveries by Columbus of land to westward had been made known, others should follow in the track of the great navigator. Among these was a handsome young Spaniard—one Hojeda—who had accompanied Columbus on his second voyage. Soon after (1499), he fitted out an expedition that reached the mainland of the yet unknown continent near the Trinidad of Columbus. With him was Amerigo Vespucci. Here they found a native

village with houses built on tree-trunks and connected by bridges. It was so like a bit of old Venice that the explorers named it Venezuela (Little Venice), and this name it bears to-day.

Nothing was publicly known of this voyage till a year after the death of Columbus, when men had coasted farther to the south of Venezuela and discovered that this land was neither Asia nor Africa, that it was not the land of Marco Polo, but a new continent indeed.

"It is proper to call it a new world," says Amerigo Vespucci. "Men of old said over and over again that there was no land south of the equator. But this last voyage of mine has proved them wrong, since in southern regions I have found a country more thickly inhabited by people and animals than our Europe or Asia or Africa."

These words among others, and an account of his voyages published in Paris, 1507, created a deep impression. A letter from Columbus announcing his discoveries had been published in 1493, but he said nothing, because he knew nothing, of a new world. Men therefore said that Amerigo Vespucci had discovered a new continent, "wherefore the new continent ought to be called America from its discoverer Amerigo, a man of rare ability, inasmuch as Europe and Asia derived their names from women." Thus the name of America was gradually adopted for the New World, though the honor and glory of its discovery must always belong to Christopher Columbus.

VASCO DA GAMA REACHES INDIA

WHILE the wonderful development westward was thrilling the minds of men, other great discoveries were being made to the east, whither the eyes of the Portuguese were still straining. Portugal had lost Columbus; she could lay no claim to the shores of America discovered by Spaniards, but the sea-route to India by the east was yet to be found by one of her explorers, Vasco da Gama. His achievement stands out brilliantly at this time; for, within a few years of the discovery of America, he was able to tell the world that India and the East could be reached by the Cape of Good Hope! The dream of Prince Henry the Navigator—of finding a way to India—was fulfilled!

How Vasco da Gama was chosen for the great command has been graphically described by a Portuguese historian, whose words are received with caution by modern authorities. According to this writer, the King of Portugal, Dom Manuel, having set his kingdom in order, "being inspired by the Lord, took the resolution to inform himself about the affairs of India." He knew that India was very far away, inhabited by dark people who had great riches and merchandise, and that there was much risk in crossing the wide seas and land to reach it. But he felt it a sacred duty to make the attempt. He ordered ships to be built according to a design of Bartholomew Diaz, "low amidships, with high castles towering fore and aft; they rode the water like ducks." The ships ready, the King prayed the Lord to show him the man whom it would please him to send upon this voyage. Days passed. One day the King was sitting in his hall with his officers when he raised his eyes and saw a gentleman of his household crossing the hall. It suddenly occurred to the King that this was the man for his command, and, calling Vasco da Gama,

he offered him the command at once. He was courageous, resolute, and firm of purpose. On his knees he accepted the great honor. A silken banner blazing with the cross of the Order of Christ was bestowed upon him; he chose the "S. Gabriel" for his flagship, appointed his brother to the "S. Raphael," and prepared for his departure. Books and charts were supplied; Ptolemy's geography was on board, as well as the "Book of Marco Polo." All being ready, Vasco da Gama and his captains spent the night in the little chapel by the sea at Belem, built for the mariners of Henry the Navigator.

Next morning—it was July, 1497—they walked in solemn procession to the shore, lighted candles in their hands, priests chanting a solemn litany as they walked. The beach was crowded with people. Under the blazing summer sun they knelt before taking leave of the weeping multitudes. Listen to the Portuguese poet Camoens, who makes Vasco da Gama the hero of his "Lusiad":

> "The neighboring mountains murmur'd back the sound,
> As if to pity moved for human woe;
> Uncounted as the grains of golden sand,
> The tears of thousands fell on Belem's strand."

So the Portuguese embarked, weighed anchor, and unfurled the sails that bore the red cross of the Order of Christ. Four little ships set out on what was to be the longest and most momentous voyage on record, while crowds stood on the shore straining their eyes till the fleet, under full sail, vanished from their sight.

After passing Cape Verde, in order to escape the currents of the Gulf of Guinea, Vasco da Gama steered southwest into an unknown part of the South Atlantic. He did not know that at one time he was within six hundred miles of the coast of South America. Day after day, week after week, passed in dreary monotony as they sailed the ocean that surrounds St. Helena, "a lonely, dreary waste of seas and boundless sky." Everything ends at last, and, having spent ninety-six days out of sight of land and sailed some four thousand five hundred miles, they drifted on to the southwest coast of Africa. In respect of time and distance on the open seas

it was a "record" voyage, far surpassing even the great feat of Columbus. November found them in a broad bay, "and," says the old log of the voyage, "we named it St. Helena." This name it still retains. After a skirmish with some tawny-colored Hottentots, the explorers sailed on, putting "their trust in the Lord to double the Cape."

But the sea was all broken with storm; high rolled the waves; and so short were the days that darkness prevailed. The crews grew sick with fear and hardship, and all clamored to put back to Portugal.

With angry words Vasco da Gama bade them be silent, though "he well saw how much reason they had at every moment to despair of their lives." The ships were now letting in much water, and cold rains soaked them all to the skin.

"All cried out to God for mercy upon their souls, for now they no longer took heed of their lives." At last the storm ceased, the seas grew calm, and they knew that, without seeing it, they had doubled the dreaded Cape, "on which great joy fell upon them and they gave great praise to the Lord."

But their troubles were not yet over. The sea was still very rough, "for the winter of that country was setting in," and even the pilot suggested turning back to take refuge for a time. When Vasco da Gama heard of turning back, he cried that they should not speak such words, because as he was going out of the bar of Lisbon he had promised God in his heart not to turn back a single span's breadth of the way; and he said he would throw into the sea any one that spoke such things. None could withstand such an iron will, and they struggled on to Mossel Bay, already discovered by Diaz. Here they landed "and bought a fat ox for three bracelets. This ox," says the log, "we dined off on Sunday; we found him very fat, and his meat nearly as toothsome as the beef of Portugal"—a pleasant meal, indeed, after three months of salted food. Here, too, they found "penguins as large as ducks, which had no feathers on their wings and which bray like asses."

But there was no time to linger here. They sailed onward till they had passed and left behind the last pillar erected by

Diaz, near the mouth of the Great Fish River. All was new now. No European had sailed these seas, no European had passed this part of the African coast. On Christmas day they found land, to which, in commemoration of Christ's Nativity, they gave the name of Natal. Passing Delagoa Bay and Sofala without sighting them, Vasco da Gama at last reached the mouth of a broad river, now known as Quilimane River, but called by the weary mariners the River of Mercy or Good Tokens. Here they spent a month cleaning and repairing, and here for the first time in the history of discovery the fell disease of scurvy broke out. The hands and feet of the men swelled, their gums grew over their teeth, which fell out so that they could not eat. This proved to be one of the scourges of early navigation—the result of too much salted food on the high seas—and no cure was found till the days of Captain Cook. Arrived at Mozambique, a low-lying coral island, they found four oceangoing ships, belonging to Arab traders, laden with gold, silver, cloves, pepper, ginger, rubies, and pearls from the East.

There were rumors, too, of a land belonging to Prester John, where precious stones and spices were so plentiful that they could be collected in baskets. This land could be reached only by camels. "This information rendered us so happy that we cried with joy, and prayed God to grant us health that we might behold what we so desired," relates the faithful journal. But difficulties and delays prevented their reaching the ever-mythical land of Prester John. Their next landing-place was Mombasa. Here they were nearly killed by treacherous Mohammedans, who hated these "dogs of Christians," as they called them. And the Portuguese were glad to sail on to Melindi, where the tall, whitewashed houses standing round the bay, with their cocoa-palms, maize-fields, and hop-gardens, reminded them of one of their own cities on the Tagus. Here all was friendly. The King of Melindi sent three sheep and free leave for the strangers to enter the port. Vasco, in return, sent the King a cassock, two strings of coral, three wash-basins, a hat, and some bells. Whereupon the King, splendidly dressed in a damask robe with green satin,

and an embroidered turban, allowed himself to be rowed out to the flagship. He was protected from the sun by a crimson satin umbrella.

Nine days were pleasantly passed in the port at Melindi, and then, with a Christian pilot provided by the King, the most thrilling part of the voyage began with a sail across the Arabian Gulf to the west coast of India. For twenty-three days the ships sailed to the northeast, with no land visible. Suddenly the dim outline of land was sighted, and the whole crew rushed on deck to catch the first glimpse of the unknown coast of India. They had just discerned the outline of lofty mountains, when a thunderstorm burst over the land and a downpour of heavy rain blotted out the view.

At last on May 21, nearly eleven months after the start from Portugal, the little Portuguese ships anchored off Calicut.

"What has brought you hither?" cried the natives, probably surprised at their foreign dress; "and what seek ye so far from home?"

"We are in search of Christians and spice," was the ready answer.

"A lucky venture. Plenty of emeralds. You owe great thanks to God for having brought you to a country holding such riches," was the Mohammedan reply.

"The city of Calicut," runs the log, "is inhabited by Christians. They are of a tawny complexion. Some of them have big beards and long hair, while others clip their hair short as a sign that they are Christians. They also wear mustaches."

Within the town, merchants lived in wooden houses thatched with palm-leaves. It must have been a quaint sight to see Vasco da Gama, accompanied by thirteen of his Portuguese, waving the flag of their country, carried shoulder high through the densely crowded streets of Calicut on his way to the chief temple and on to the palace of the King. Roofs and windows were thronged with eager spectators anxious to see these Europeans from so far a country. Many a scuffle took place outside the palace gates; knives were brandished, and men were injured before the successful explorer reached

the King of Calicut. The royal audience took place just before sunset on May 28, 1498. The King lay on a couch, covered with green velvet, under a gilt canopy, while Vasco da Gama gave him an account of Portugal and its sovereign, the "lord of many countries and the possessor of great wealth, exceeeding that of any king of these parts"; adding that for sixty years the Portuguese had been trying to find the sea-route to India. The King gave leave for the foreigners to barter their goods, but the Indians scoffed at their offer of hats, scarlet hoods, sugar, and oil.

"That which I ask of you is gold, silver, corals, and scarlet cloth," said the King; "for my country is rich in cinnamon, cloves, ginger, pepper, and precious stones."

Vasco da Gama left India with a scant supply of Christians and spices; but with his great news he hurried back to Portugal. Though in his two years' absence he had lost his brother Paul and over one hundred of his men, he had discovered the ocean route to India—a discovery more far-reaching than he had any idea of at this time.

"And the King," relates the old historian, "overjoyed at his coming, sent a Nobleman and several Gentlemen to bring him to Court; where, being arrived through Crowds of Spectators, he was received with extraordinary honor. For this Glorious Price of Service, the Privilege of being called Dom was annexed to his Family: To his Arms was added Part of the King's. He had a Pension of three thousand Ducats yearly, and he was afterward presented to greater honors for his Services in the Indies, where he will soon appear again."

DISCOVERY OF THE SPICE ISLANDS

IT was but natural that the Portuguese, flushed with victory, should at once dispatch another expedition to India.

Was there some vexation in the heart of Vasco da Gama, the "Admiral of India," when the command of the new fleet was given to Pedro Cabral? History is silent. Anyhow, in the March of 1500 we find this "Gentleman of Great Merit" starting off with thirteen powerfully armed ships and some fifteen hundred men, among them the veteran explorer Bartholomew Diaz, a party of eight Franciscan friars to convert the Mohammedans, eight chaplains, skilled gunners, and merchants to buy and sell in the King's name at Calicut. The King himself accompanied Cabral to the waterside. He had already adopted the magnificent title, "King, by the Grace of God, of Portugal, and of the Algarves, both on this side the sea and beyond it in Africa, Lord of Guinea and of the Conquest, navigation, and Commerce of Ethiopia, Arabia, Persia, and India."

Then Cabral, flying a banner with the royal arms of Portugal, started on a voyage that was to secure for Portugal "an empire destined to be richer and greater than all her dominions in Asia." Sailing far to the west, he fell in with the South American continent and was carried to a new land. The men went on shore and brought word that "it was a fruitful country, full of trees, and well inhabited. The people were swarthy, and used bows and arrows." That night a storm arose and they ran along the coast to seek a port. Here mass was said. Parrots were exchanged for paper and cloth. Then Cabral erected a cross (which was still shown when Lindley visited Brazil three hundred years later), and named the country the "Land of the Holy Cross." This name was discarded later, when the new-found land was identified with

Brazil, already sighted by Pinzon in one of the ships of Columbus.

Meanwhile, unconscious of the importance of this discovery, Cabral sailed on toward the Cape of Good Hope. There is no time to tell of the great comet that appeared, heralding a terrific storm that suddenly burst upon the little fleet. In the darkness and tempest four ships went down with all hands—among them old Bartholomew Diaz, the discoverer of the Cape of Good Hope, who thus perished in the waters he had been the first to navigate.

September found Cabral at last at anchor off Calicut. He found the King yet more resplendent than when Vasco da Gama saw him the year before. The old historians revel in their descriptions of him. "On his Head was a Cap of Cloth of Gold, at his Ears hung Jewels, composed of Diamonds, Sapphires, and Pearls, two of which were larger than Walnuts. His Arms, from the Elbow to the Wrist and from the knees downward, were loaded with bracelets set with infinite Precious Stones of great Value. His Fingers and Toes were covered with Rings. In that on his great Toe was a large Ruby of a surprising Luster. Among the rest there was a Diamond bigger than a large Bean. But all this was nothing, in comparison to the Richness of his Girdle, made with precious stones set in Gold, which cast a Luster that dazzled everybody's Eyes."

He allowed Cabral to establish a depot at Calicut for European goods; so a house was selected by the waterside and a flag bearing the arms of Portugal erected on the top. For a time all went well, but the Mohammedans proved to be difficult customers, and disputes soon arose. A riot took place; the infuriated native traders stormed the depot and killed the Portuguese within. Cabral in revenge bombarded the city, and leaving the wooden houses in flames, he sailed away to Cochin and Kananur on the coast of Malabar. Soon after this he returned home with only six out of the thirteen ships, and from this time he disappears from the pages of history.

Just before Cabral's return, the King of Portugal, thinking that trade was well established between India and his own

country, dispatched a "valiant gentleman" in command of four ships to carry merchandise to the newly discovered country. But his voyage and adventures are only important inasmuch as he discovered the island of Ascension when outward bound, and the island of St. Helena on the way home. So favorable was the account of this island that Portuguese admirals were ordered for the future to touch there for refreshments.

The news of Cabral's adventures at Calicut inspired a yet larger expedition to the East, and Vasco da Gama, now Admiral of the Eastern seas, was given command of some fifteen ships, which sailed from the Tagus in February, 1502. The expedition, though avowedly Christian, was characterized by injustice and cruelty. Near the coast of Malabar the Portuguese fleet met with a large ship full of Mohammedan pilgrims from Mecca. The wealth on board was known to be enormous, and Dom Vasco commanded the owners to yield up their riches to the King of Portugal. This they naturally refused to do. Whereupon the Portuguese fired, standing calmly to watch the blazing ships with their human freight of men, women, and children. True, one historian declares that all the children were removed to the Portuguese ship to be converted into good little Christians. Another is more nearly concerned with the money. "We took a Mecca ship on board of which were three hundred and eighty men and many women and children, and we took from it fully twelve thousand ducats, with goods worth at least another ten thousand. And we burned the ship and all the people on board with gunpowder on the first day of October."

Their instructions to banish every Mohammedan in Calicut were faithfully obeyed. Dom Vasco seized and hanged a number of helpless merchants quietly trading in the harbor. Cutting off their heads, hands, and feet, he had them flung into a boat, which was allowed to drift ashore, with a cruel suggestion that the severed limbs would make an Indian curry. Once more Calicut was bombarded and Dom Vasco sailed on to other ports on the Malabar coast, where he loaded his ships with spices taken from poor folk who dared not refuse.

He then sailed home again, reaching Portugal "safe and sound, *Deo gratias,*" but leaving behind him hatred and terror and a very dreadful idea of these Christians who felt it their duty to exterminate all followers of Mohammed.

Conquest usually follows discovery, and the Portuguese, having discovered the entire coast of West, South, and much of East Africa and the western coast of India, now proceeded to conquer it for their own. Expedition after expedition left Portugal for the east coast of Africa and India. One of these was commanded by Dom Francisco Almeida, "a nobleman of courage and experience," who sailed off with the title of Viceroy. Not only was he to conquer, but to rule, not only to sustain the sea-power of Portugal, but to form a government.

A story is told of the ignorance of the men sent to man the ships under Almeida. So raw were they that they hardly knew their right hand from their left, still less the difference between starboard and larboard, till their captain hit on the happy notion of tying a bundle of garlic over one side of the ship and a handful of onions over the other; so the pilot gave orders to the helmsman thus: "Onion your helm!" or "Garlic your helm!"

On the way out, Almeida built a strong fortress near Zanzibar, organized a regular Portuguese Indian pilot service, and established his seat of government at Cochin. Then he sent his son Lorenzo, a daring youth of eighteen, to bombard the city of Quilon, whose people were constantly intriguing against the Portuguese. Having carried out his orders, young Lorenzo, ordered to explore the Maldive Islands, was driven by a storm to an "island opposite Cape Comorin, called Ceylon, and separated from thence by a narrow sea," where he was warmly received by the native king, whose dress sparkled with diamonds. Lorenzo erected here a marble pillar, with the arms of Portugal carved thereon, and took possession of the island. He also sent back to Portugal the first elephant ever sent thither.

Ceylon was now the farthest point which flew the flag of Portugal toward the east. Doubtless young Lorenzo would have carried it farther, but he was killed at the early age

of twenty-one, his legs being shattered by a cannon-ball during a sea-fight. He sat by the mainmast and continued to direct the fighting till a second shot ended his short but brilliant career. The Viceroy, "whose whole being was centered in his devotion to his only son, received the tidings with outward stoicism." "Regrets," he merely remarked, "are for women." Nevertheless he revenged the death of his son by winning a victory over the opposing fleet and bidding his captains rejoice over "the good vengeance our Lord has been pleased, of His mercy, to grant us."

But the days of Almeida were numbered. He had subdued the Indian coast, he had extended Portuguese possessions in various directions, his term of office was over, and he was succeeded by the famous Albuquerque, who had already distinguished himself in the service of Portugal by his efforts to obtain Ormuz for the Portuguese. Now Viceroy of India, he found full scope for his boundless energy and vast ambition. He first attacked Calicut and reduced it to ashes. Then he turned his attention to Goa, which he conquered, and which became the commercial capital of the Portuguese in India for the next hundred years. Not only this, but it was soon the wealthiest city on the face of the earth and the seat of the government. Albuquerque's next exploit was still more brilliant and more important.

In 1509 he had sent a Portuguese explorer, Sequira, with a small squadron to make discoveries in the East. He was to cross the Bay of Bengal and explore the coast of Malacca. Sequira reached the coast and found it a center for trade from east and west, "most rich and populous." But he had reason to suspect the demonstrations of friendship by the king of these parts, and refused to attend a festival prepared in his honor. This was fortunate, for some of his companions who landed for trade were killed. He sailed about the island of Sumatra, "the first land in which we knew of men's flesh being eaten by certain people in the mountains who gild their teeth. In their opinion the flesh of the blacks is sweeter than that of whites." Many were the strange tales brought back to Cochin by Sequira from the new lands—rivers of oil

—hens with flesh as black as ink—people that had tails, like sheep!

Albuquerque resolved that Malacca should belong to the Portuguese, and with nineteen ships and fourteen hundred fighting men he arrived off the coast of Sumatra, spreading terror and dismay among the multitudes that covered the shore. The work of destruction was short; at last every inhabitant of the city was driven out or slain, and the Portuguese plundered the city to their hearts' content.

The fall of Malacca was one of vast importance to the Portuguese. Was it not the key to the Eastern gate of the Indian Ocean—the gate through which the whole commerce of the Spice Islands, the Philippines, Japan, and far Cathay passed on its road to the Mediterranean? Was it not one of the largest trade markets in Asia, where rode the strange ships of many a distant shore? The fame of Albuquerque spread throughout the Eastern world. But he was not content with Malacca. The Spice Islands lay beyond—the Spice Islands, with all their cloves and nutmegs and their countless riches, must yet be won for Portugal.

Up to this year, 1511, they had not been reached by the Portuguese. But now Francisco Serrano was sent off from Malacca to explore farther. Skirting the north of Java, he found island after island rich in cloves and nutmegs. So struck was he with his new discoveries that he wrote to his friend Magellan: "I have discovered yet another new world larger and richer than that found by Vasco da Gama."

It is curious to remember how vastly important was this little group of islands—now part of the Malay Archipelago and belonging to the Dutch—to the explorers of the sixteenth century. Strange tales as usual reached Portugal about these newly found lands. Here lived men with "spurs on their ankles like cocks"; here were hogs with horns; hens that laid their eggs nine feet under ground; rivers with living fish, yet so hot that they took the skin off any man that bathed in their waters; poisonous crabs; oysters with shells so large that they served as fonts for baptizing children.

Truly these mysterious Spice Islands held more attractions for the Portuguese explorers than did the New World of Columbus and Vespucci. Their possession meant riches and wealth. And this was not the end. Was there not land beyond? Indeed, before the Spice Islands were conquered by Portugal, trade had already been opened up with China, and before the century was half over, three Portuguese seamen had visited Japan.

BALBOA SEES THE PACIFIC OCEAN

IT is said that Ferdinand Magellan, the hero of all geographical discovery, with his circumnavigation of the whole round world, had cruised about the Spice Islands, but what he really knew of them from personal experience no one knows. He had served under Almeida, and with Albuquerque had helped in the conquest of Malacca. After seven years of a "vivid life of adventure by sea and land, a life of siege and shipwreck, of war and wandering," inaction became impossible. He busied himself with charts and the art of navigation. He dreamed of reaching the Spice Islands by sailing *west,* and after a time he laid his schemes before the King of Portugal. Whether he was laughed at as a dreamer or a fool we know not. His plans were received with cold refusal. History repeats itself. Like Christopher Columbus twenty years before, Magellan now said good-by to Portugal and made his way to Spain.

Since the first discovery of the New World by Spain, that country had been busy sending out explorer after explorer to discover and annex new portions of America. Bold navigators, Pinzon, Mendoza, Bastidas, Juan de la Cosa, and Solis—these and others had almost completed the discovery of the east coast; indeed, Solis might have been the first to see the Pacific Ocean had he not been killed and eaten at the mouth of the river La Plata. This great discovery was left to Vasco Nuñez de Balboa, who, from the Peak of Darien, was the first man to see beyond the strange New World (1513). His discovery threw light on the limitation of land that made up the new country, and illuminated the scheme of Magellan.

Balboa was "a gentleman of good family, great parts, liberal education, of a fine person, and in the flower of his age."

He had emigrated to the new Spanish colony of Hispaniola (Haiti), where he had got into debt. No debtor was allowed to leave the island, but Balboa, the gentleman of good family, longed for further exploration; he "yearned beyond the skyline where the strange roads go down." And one day the yearning grew so great that he concealed himself in a bread-cask on board a ship leaving the shores of Hispaniola. For some days he remained hidden. When the ship was well out to sea he made his appearance. Angry, indeed, was the captain—so angry that he threatened to land the stowaway on a desert island. But he was touched by the entreaties of the crew, and Balboa was allowed to sail on in the ship.

It was a fortunate decision, for when, soon after, the ship ran heavily upon a rock, it was the Spanish stowaway Balboa who saved the party from destruction. He led the shipwrecked crew to a river of which he knew, named Darien by the Indians. He did *not* know that they stood on the narrow neck of land—the Isthmus of Panama—which connects North and South America. The account of the Spanish intrusion is typical: "After having performed their devotions, the Spaniards fell resolutely on the Indians, whom they soon routed, and then went to the town, which they found full of provisions to their wish. Next day they marched up the country among the neighboring mountains, where they found houses replenished with a great deal of cotton, both spun and unspun, plates of gold in all to the value of ten thousand pieces of fine gold."

A trade in gold was set up by Balboa, who became governor of the new colony formed by the Spaniards; but the greed of these foreigners quite disgusted the native prince of these parts.

"What is this, Christians? Is it for such a little thing that you quarrel? If you have such a love of gold, I will show you a country where you may fulfil your desires. You will have to fight your way with great kings whose country is distant from our country six suns."

So saying, he pointed away to the south, where, he said, lay a great sea. Balboa resolved to find this great sea. It

might be the ocean sought by Columbus in vain, beyond which was the land of great riches where people drank out of golden cups. So he collected some two hundred men and started forth on an expedition full of doubt and danger. He had to lead his troops, worn with fatigue and disease, through deep marshes rendered impassable by heavy rains, over mountains covered with trackless forest, and through defiles from which the Indians showered down poisoned arrows.

At last, led by native guides, Balboa and his men struggled up the side of a high mountain. When near the top he bade his men stop. He alone must be the first to see the great sight that no European had yet beheld. With "transports of delight" he gained the top, and, "silent, upon a peak in Darien," he looked down upon the boundless ocean, bathed in tropical sunshine. Falling on his knees, he thanked God for his discovery of the Southern Sea. Then he called up his men. "You see here, gentlemen and children mine, the end of our labors."

The notes of the Te Deum then rang out on the still summer air, and, having made a cross of stones, the little party hurried to the shore. Finding two canoes, the men sprang in, crying aloud joyously that they were the first Europeans to sail on the new sea; while Balboa himself plunged in, sword in hand, and claimed possession of the Southern Sea for the King of Spain. The natives told him that the land to the south was without end, and that it was possessed by powerful nations who had abundance of gold. And Balboa thought this referred to the Indies, knowing nothing as yet of the riches of Peru.

It is melancholy to learn that the man who made this very great discovery was publicly hanged four years later in Darien. But his news had reached Magellan. There was then a great Southern Sea beyond the New World. Magellan was more than ever certain that by this sea he could reach the Spice Islands. Moreover, he persuaded the King of Spain that his country had a right to these valuable islands, and promised that he would conduct a fleet round the south of the great new continent westward to reach them. His proposal was ac-

cepted by Charles V., and the youthful monarch provided Spanish ships for the great enterprise. The voyage was not popular, the pay was low, the way unknown, and in the streets of Seville the public crier called for volunteers. It was a motley crew of some two hundred and eighty men that sailed thence, composed of Spaniards, Portuguese, Genoese, French, Germans, Greeks, Malays, and one Englishman only. There were five ships. "They are very old and patched," says a letter addressed to the King of Portugal, "and I would be sorry to sail even for the Canaries in them, for their ribs are soft as butter."

Magellan hoisted his flag on board the "Trinidad" of one hundred and ten tons burden. The largest ship, the "S. Antonio," was captained by a Spaniard—Cartagena; the "Conception," ninety tons, by Gaspar Quesada. The "Victoria" of eighty-five tons, that alone bore home the news of the circumnavigation of the world, was at first commanded by the traitor Mendoza; and the little "Santiago," seventy-five tons, was under the brother of Magellan's old friend Serrano.

What if the commander himself left a young wife, and a son but six months old? The fever of discovery was upon him, and flying the Spanish flag for the first time in his life, Magellan, on board the "Trinidad," led his litttle fleet away from the shores of Spain. He never saw wife or child again. Before three years had passed all three were dead.

Carrying a torch or fagot of burning wood on the poop, so that the other ships should never lose sight of it, the "Trinidad" sailed onward.

"Follow the flagship and ask no questions." Such were Magellan's instructions to his not too loyal captains.

MAGELLAN SAILS ROUND THE WORLD

MAGELLAN and his men had left Seville on September 20, 1519. A week later they were at the Canaries. Then they passed Cape Verde, and land faded from their sight as they made for the southwest. For some time they had a good run in fine weather. Then "the upper air burst into life," and a month of heavy gales followed. An Italian count who accompanied the fleet writes a long story of the sufferings of the crew during these terrific Atlantic storms.

"During these storms," he says, "the body of St. Anselm appeared to us several times; one night that it was very dark on account of the bad weather the saint appeared in the form of a fire lighted at the summit of the mainmast and remained there near two hours and a half, which comforted us greatly, for we were in tears, only expecting the hour of perishing; and, when that holy light was going away from us, it gave out so great a brilliancy in the eyes of each, that we were like people blinded and calling out for mercy. For without any doubt nobody hoped to escape from that storm."

Two months of incessant rain and diminished rations added to their miseries. The spirit of mutiny now began to show itself. Already the Spanish captains had murmured against the Portuguese commander.

"Be they false men or true, I will fear them not; I will do my appointed work," said Magellan firmly.

It was November when they made the coast of Brazil in South America, already sighted by Cabral and explored by Pinzon. But the disloyal captains were not satisfied, and one day the captain of the "S. Antonio" boarded the flagship and openly insulted Magellan. He must have been a little astonished when the Portuguese commander seized him by the collar,

exclaiming: "You are my prisoner!" giving him into custody and appointing another in his place.

Food was now procurable, and a quantity of sweet pineapples must have had a soothing effect on the discontented crews. The natives traded on easy terms. For a knife, they produced four or five fowls; for a comb, fish for ten men; for a little bell, a basketful of sweet potatoes. A long drought had preceded Magellan's visit to these parts, but rain began with the advent of the strangers, and the natives made sure that they had brought it with them. Such an impression once made, there was little difficulty in converting them to the Christian faith. The natives united in prayer with the Spaniards, "remaining on their knees, with their hands joined in great reverence, so that it was a pleasure to see them," writes one of the party.

The day after Christmas found them again sailing south by the coast, and early in the New Year they anchored at the mouth of the Rio de la Plata, where Solis had lost his life at the hands of the cannibals some five years before. He had succeeded Vespucci in the service of Spain, and with others was exploring the coast, when a body of Indians, "with a terrible cry and most horrible aspect," suddenly rushed out upon them, killed, roasted, and devoured them.

Through February and March, Magellan led his ships along the shores of bleak Patagonia, seeking for an outlet to the Spice Islands. Winter was coming on and no strait had yet been found. Storm after storm now burst over the little ships, often accompanied by thunder and lightning; poops and forecastles were carried away, and all expected destruction, when "the holy body of St. Anselm appeared and immediately the storm ceased."

It was quite impossible to proceed farther to the unknown south, so, finding a safe and roomy harbor, Magellan decided to winter there. Port S. Julian he named it, and he knew full well that there they must remain four or five months. He put the crew on diminished rations for fear the food should run short before they achieved their goal. This was the last straw. Mutiny had long been smoldering. The hardships of

the voyage, the terrific storms, the prospect of a long antarctic winter of inaction on that wild Patagonian coast—these things caused officers and men to grumble and to demand an immediate return to Spain. But the "stout heart of Magellan" was undaunted.

On Easter day the mutiny began. Two of the Spanish captains boarded the "S. Antonio," seized the Portuguese captain thereof, and put him in chains. Then stores were broken open, bread and wine generously handed round, and a plot hatched to capture the flagship, kill Magellan, seize his faithful Serrano, and sail home to Spain.

The news reached Magellan's ears. He at once sent a messenger with five men bearing hidden arms to summon one of the traitor captains on board the flagship. Of course he stoutly refused to go. Then the messenger sprang upon him and stabbed him to death. As the rebellious captain fell dead on the deck of his ship, the dazed crew at once surrendered. Thus Magellan, by his prompt measures, quelled a mutiny that might have lost him the whole expedition. None of his men ever tried to mutiny again while he lived and commanded.

The fleet had been two months in the Port S. Julian without seeing a single native. But "one day," says the historian, "without any one expecting it, we saw a giant, who was on the shore of the sea, dancing and leaping and singing. He was so tall that the tallest of us only came up to his waist; he was well built; he had a large face, painted red all round, and his eyes also were painted yellow around them, and he had two hearts painted on his cheeks; he had but little hair on his head and it was painted white."

The Patagonian giant pointed to the sky to know whether these Spaniards had descended from above. He was soon joined by others, evidently greatly surprised to see such large ships and such little men. Indeed, the heads of the Spaniards hardly reached the giants' waists, and they must have been greatly astonished when two of them ate a large basketful of biscuits and rats, without skinning the rodents, and drank half a bucket of water at each sitting.

With the return of spring weather in October, 1520, Magel-

lan led the little fleet upon its way. He was rewarded a few days later by finding the strait for which he and others had been so long searching.

"It was the straight," says the historian simply, "now cauled the straight of Magellans."

A struggle was before them. For more than five weeks the Spanish mariners fought their way through the winding channels of the unknown strait. On one side rose high mountains covered with snow. The weather was bad, the way unknown. Do we wonder to read that "one of the ships stole away privily and returned into Spain," and that the remaining men begged piteously to be taken home?

Magellan spoke "in measured and quiet tones": "If I have to eat the leather of the ships' yards, yet will I go on and do my work." His words came truer than he knew. On the southern side of the strait constant fires were seen, which led Magellan to give the land the name it bears to-day—Tierra del Fuego. It was not visited again for many years.

At last the ships fought their way to the open sea—Balboa's Southern Sea—and "when the Captain Magellan was past the strait and saw the way open to the other main sea he was so glad thereof that for joy the tears fell from his eyes."

The calm expanse seemed so pleasant after the heavy tiring storms, that he called the still waters before him the Pacific Ocean.

Three little ships had now emerged, battered and worn, manned by crews gaunt and thin and shivering. Magellan took a northerly course to avoid the intense cold, before turning to cross the strange obscure ocean, which no European had yet realized. Just before Christmas the course was altered and the ships were turned to the northwest. In that direction they expected soon to find the Spice Islands. No one had any idea of the vastness of the Pacific Ocean.

"Well was it named the Pacific," remarks the historian, "for during three months and twenty days we met with no storm."

Two months passed away, and still they sailed peacefully

on, day after day, week after week, across a waste of desolate waters.

"Alone, alone—all, all alone;
Alone on a wide, wide sea."

At last, one January day, they sighted a small wooded island, but it was uninhabited; they named it S. Paul's Island and passed on their way. They had expected to find the shores of Asia close by those of America. The size of the world was astounding. Another island was passed. Again no people, no consolation; only many sharks. There was bitter disappointment on board. They had little food left. "We ate biscuit, but in truth it was biscuit no longer, but a powder full of worms. So great was the want of food, that we were forced to eat the hides with which the mainyard was covered to prevent the chafing against the rigging. These hides we exposed to the sun first to soften them, by putting them overboard for four or five days, after which we put them on the embers, and ate them thus. We had also to make use of sawdust for food, and rats became a great delicacy." No wonder scurvy broke out in its worst form—nineteen died and thirteen lay too ill to work.

For ninety-eight days they sailed across the unknown sea, "a sea so vast that the human mind can scarcely grasp it," till at last they came on a little group of islands peopled with savages of the lowest type—such expert thieves that Magellan called the new islands the Ladrones, or isle of robbers. Still, there was fresh food here, and the crews were greatly refreshed before they sailed away. The food came too late to save the one Englishman of the party—Master Andrew of Bristol—who died just as they moved away. Then they found the group afterward known as the Philippines (after Philip II. of Spain). Here were merchants from China, who assured Magellan that the famous Spice Islands were not far off. Now Magellan had practically accomplished what he set out to do, but he was not destined to reap the fruits of his victory.

With a good supply of fresh food, the sailors grew better,

and Magellan preferred cruising about the islands, making friends of the natives and converting them to Christianity, to pushing on for the Spice Islands. Here was gold, too, and he busied himself making the native rulers pay tribute to Spain. Easter was drawing near, and the Easter services were performed on one of the islands. A cross and a crown of thorns were set upon the top of the highest mountain, that all might see them and worship.

April passed away, and Magellan was still busy with Christians and gold. But his enthusiasm carried him too far. A quarrel arose with one of the native kings. Magellan landed with armed men, only to be met by thousands of defiant natives. A desperate fight ensued. Again and again the explorer was wounded, till "at last the Indians threw themselves upon him with iron-pointed bamboo spears and every weapon they had and ran him through—our mirror, our light, our comforter, our true guide—until they killed him."

Such was the tragic fate of Ferdinand Magellan, "the greatest of ancient and modern navigators"—tragic because, after dauntless resolution and unwearied courage, he died in a miserable skirmish at the last on the very eve of victory.

With grief and despair in their hearts, the remaining members of the crew, now only one hundred and fifteen, crowded on to the "Trinidad" and the "Victoria" for the homeward voyage. It was September, 1522, when they reached the Spice Islands—the goal of all of their hopes. Here they took on board some precious cloves and birds of paradise, spent some pleasant months, and, laden with spices, resumed their journey. But the "Trinidad" was overladen with cloves, and too rotten to undertake so long a voyage without undergoing repairs, so the little "Victoria" alone sailed for Spain, with sixty men aboard to carry home their wonderful news. Who shall describe the terrors of that homeward voyage, the suffering, starvation, and misery of the weary crew? Man after man drooped and died, until by the time they reached the Cape Verde Islands there were but eighteen left.

When the welcome shores of Spain at length appeared, eighteen gaunt, famine-stricken survivors, with their captain,

staggered ashore to tell their proud story of the first circumnavigation of the world by their lost commander, Ferdinand Magellan.

We miss the triumphal return of the conqueror, the audience with the King of Spain, the heaped honors, the crowded streets, the titles, and the riches. The proudest crest ever granted by a sovereign—the world, with the words: "Thou hast encompassed me"—fell to the lot of Del Cano, the captain who brought home the little "Victoria." For Magellan's son was dead, and his wife Beatrix, "grievously sorrowing," had passed away on hearing the news of her husband's tragic end.

CORTES EXPLORES AND CONQUERS MEXICO

IT might have been expected that the discovery of the immense body of water on the far side of America would draw other explorers to follow, but news was slowly spread, and more slowly responded to in action in those days, and it was not till fifty-three years later that the Pacific was crossed a second time; then its navigator was Sir Francis Drake.

In the maps of the day, Newfoundland and Florida, as well as Mexico, were placed in Asia. Even while Magellan was fighting the gales of the Atlantic *en route* for his long-sought strait, another strange and wonderful country was being unveiled and its unsurpassed wealth laid at the feet of Spain. The starting-place for further Spanish exploration had been, from the days of Columbus, the West Indies. From this center, the coast of Florida had been discovered in 1513; from here, the same year, Balboa sailed and discovered the Pacific Ocean; from here in 1517 a little fleet was fitted out under Francisco Hernandez de Cordova, "a man very prudent and courageous and strongly disposed to kill and kidnap Indians." As pilot he had been with Columbus on his fourth voyage some fourteen years before. He suggested that his master had heard rumors of land to the west, and sure enough after sailing past the peninsula of Yucatan, they found signs of the Eastern civilization so long sought in vain.

"Strange-looking towers or pyramids, ascended by stone steps, greeted their eyes, and the people who came out in canoes to watch the ships were clad in quilted cotton doublets and wore cloaks and brilliant plumes."

They had heard of the Spaniards; indeed, only little more

than one hundred miles of sea divided Yucatan from Cuba; and they were anything but pleased to see these strangers off their coast.

"Couez cotoche" (Come to my house), they cried, for which reason Cordova called the place Cape Catoche, as it is marked in our maps to-day. Along the coast sailed the Spaniards to a place called by the Indians Quimpeche, now known as Campechy Bay. They were astonished to find how civilized were these natives, and how unlike any others they had met in these parts. But the inhabitants resented the landing of Cordova and his men, and with arrows and stones and darts they killed or wounded a great number of Spaniards, including the commander himself, who sent an account of his voyage to the governor of Cuba and died a few days later.

His information was interesting and inspiring, and soon young Juan Grijalva was on his way to the same land, accompanied by "two hundred and fifty stout soldiers" and the old pilot Alvarado, who had led both Columbus and Cordova. Grijalva explored for the first time the coast of this great new country.

"Mexico, Mexico," repeated the Indians with whom they conversed. Gold, too, was produced, gold ornaments, gold workmanship, until the young and handsome Grijalva was fitted out completely with a complete suit of gold armor. He returned enthusiastic over the new land, where lived a powerful ruler over many cities. Surely this was none other than the Great Khan, with the riches and magnificence of an Eastern potentate—a land worthy of further exploration.

The conqueror of Mexico now comes upon the scene—young, bold, devout, unscrupulous, "a respectable gentleman of good birth"—Hernando Cortes. Great was the enthusiasm in Cuba to join the new expedition to the long-lost lands of the Great Khan; men sold their lands to buy horses and arms, pork was salted, armor was made, and at last Cortes, a plume of feathers and a gold medal in his cap, erected on board his ship a velvet flag with the royal arms embroidered in gold, and the words: "Brothers, follow the cross in faith, for under its guidance we shall conquer."

His address to his men called forth their devotion: "I hold out to you a glorious prize, but it is to be won by incessant toil. Great things are achieved only by great exertions, and glory was never the reward of sloth. If I have labored hard and staked my all on this undertaking, it is for the love of that renown which is the noblest recompense of man. But if any among you covet riches more, be but true to me, as I will make you masters of such as our countrymen have never dreamed of. You are few in number, but strong in resolution; doubt not but that the Almighty, who has never deserted the Spaniard in his contest with the infidel, will shield you, for your cause is a just cause, and you are to fight under the banner of the cross."

In this spirit of enthusiasm the fleet sailed from the shores of Cuba on February 18, 1519, and was soon on its way to the land of Mexico. The pilot Alvarado was with this expedition also. Rounding Cape Catoche and coasting along the southern shores of Campechy Bay, with a pleasant breeze blowing off the shore, Cortes landed with all his force—some five hundred soldiers—on the spot where now stands the city of Vera Cruz. "Little did the conqueror imagine that the desolate beach on which he first planted his foot was one day to be covered by a flourishing city, the great mart of European and Oriental trade—the commercial capital of New Spain."

On a wide, level plain Cortes encamped, his soldiers driving in stakes and covering them with boughs to protect themselves from the scorching rays of the fierce tropical sun. Natives came down to the shore, bringing their beautiful featherwork cloaks and golden ornaments. Cortes had brought presents for the King—the Great Khan as he thought—and these he sent with a message that he had come from the King of Spain and greatly desired an audience with the Khan. The Indians were greatly surprised to hear that there was another king in the world as powerful as their Montezuma, who was more god than king, who ate from dishes of gold, on whose face none dared look, in whose presence none dared speak without leave.

To impress the messengers of the King, Cortes ordered

his soldiers to go through some of their military exercises on the wet sands. The bold and rapid movement of the troops, the glancing of the weapons, and the shrill cry of the trumpet filled the spectators with astonishment; and when they heard the thunder of the cannon, and witnessed the volumes of smoke and flame issuing from these terrible engines, the rushing of the balls as they hissed through the trees of the neighboring forest, shivering their branches, they were filled with consternation.

To the intense surprise of the Spaniards, these messengers sketched the whole scene on canvas with their pencils, not forgetting the Spanish ships, or "water-houses," as they called them, with their dark hulls and snow-white sails reflected in the water as they swung lazily at anchor.

Then they returned to the King and related the strange doings of the white strangers who had landed on their shores; they showed him their picture-writing, and Montezuma, King of the great Mexican empire that stretched from sea to sea, was "sore troubled." He refused to see the Spaniards—the distance of his capital was too great, since the journey was beset with difficulties. But the presents he sent were so gorgeous, so wonderful, that Cortes resolved to see for himself the city that produced such wealth, whatever its ruler might decree. Here was a plate of gold as large as a coach-wheel, representing the sun; one in silver even larger, representing the moon; there were many golden toys representing dogs, lions, tigers, apes, ducks, and wonderful plumes of green feathers.

The man who had sailed across two thousand leagues of ocean held lightly the idea of a short land journey, however difficult, and Cortes began his preparations for the march to Mexico. He built the little settlement at Vera Cruz, the "Rich Town of the True Cross," on the seashore, as a basis for operations. Although the wealth allured them, there were many who viewed with dismay the idea of the long and dangerous march into the heart of a hostile land. After all they were but a handful of men pitted against a powerful nation. Murmurs arose and reached the ears of Cortes. He was equal

to the occasion, and resolutely burned all the ships in the harbor save one. Then panic ensued. Mutiny threatened.

"I have chosen my part!" cried Cortes. "I will remain here while there is one to bear me company. If there be any so craven as to shrink from sharing the dangers of our glorious enterprise, let them go home. There is still one vessel left. Let them take that and return to Cuba. They can tell there how they have deserted their commander and their comrades, and patiently wait till we return loaded with the spoils of Mexico."

He touched the right chord. Visions of future wealth and glory rose again before them, confidence in their leader revived, and, shouting bravely, "To Mexico! to Mexico!" the party started off on their perilous march. It was August 16, 1519, when the little army, "buoyant with high hopes and lofty plans of conquest," set forth. The first part of the way lay through beautiful country rich in cochineal and vanilla, with groves of many-colored birds and "insects whose enameled wings glistened like diamonds in the blazing sun of the tropics."

Then came the long and tedious ascent of the Cordilleras leading to the tableland of Mexico. Higher and higher grew the mountains. Heavy falls of sleet and hail, icy winds, and driving rain drenched the little Spanish party as they made their way bravely upward, till at last they reached the level of seven thousand feet, and found the great tableland rolling out along the crest of the Cordilleras.

Hitherto they had met with no opposition among the natives they had seen. Indeed, as the little army advanced, it was often found that the inhabitants of the country fled awe-struck before them. The reason of this was that the Mexicans believed in a god called the Bird-Serpent, around whom many a legend had grown up. Temples had been built in his honor, and horrible human sacrifices offered to appease him; for was he not the Ruler of the Winds, the Lord of the Lightning, the Gatherer of the Clouds? But the bright god had sailed away one day, saying he would return with fair-skinned men to possess the land in the fulness of time. Surely, then, the time

had come and their god had come again. Here were the fair-skinned men in shining armor marching back to their own again, and Cortes at their head—was he not the god himself? The cross, too, was a Mexican symbol, so Cortes was allowed to put it up in the heathen temples without opposition.

The inhabitants of Tlaxcala—fierce republicans who refused to own the sway of Montezuma—alone offered resistance, and how Cortes fought and defeated them with his handful of men is truly a marvel.

It was three months before they reached the goal of all their hopes—the golden city of Mexico. The hardships and horrors of the march had been unsurpassed, but as the beautiful valley of Mexico unfolded itself before them in the early light of a July morning, the Spaniards shouted with joy: "It is the promised land! Mexico! Mexico!"

"Many of us were disposed to doubt the reality of the scene before us and to suspect we were in a dream," says one of the party. "I thought we had been transported by magic to the terrestrial paradise."

Water, cultivated plains, shining cities, with shadowy hills beyond, lay like some gorgeous fairyland before and below them. At every step some new beauty appeared in sight, and the wonderful City of the Waters with its towers and shining palaces rose out of the surrounding mists.

The city was approached by three solid causeways some five miles long. It was crowded with spectators "eager to behold such men and animals as had never been seen in that part of the world."

At any moment the little army of four hundred and fifty Spaniards might have been destroyed, surrounded as they were by overwhelming numbers of Indian foes. It was a great day in the history of European discovery when the Spaniard first set foot in the capital of the Western world. Everywhere was evidence of a crowded and thriving population and a high civilization. At the walls of the city they were met by Montezuma himself. Amid a crowd of Indian nobles, preceded by officers of state bearing golden wands, was the royal palanquin blazing with burnished gold. It was borne

on the shoulders of the nobles, who, barefoot, walked slowly with eyes cast to the ground. Descending from his litter, Montezuma advanced under a canopy of gaudy featherwork powdered with jewels and fringed with silver. His cloak and sandals were studded with pearls and precious stones, among which emeralds were conspicuous. Cortes dismounted, greeted the King, and spoke of his mission to the heathen and of his master, the mighty ruler of Spain. Everywhere Cortes and his men were received with friendship and reverence; for was he not the long-lost Child of the Sun? The Spanish explorer begged Montezuma to give up his idols and to stop his terrible human sacrifices. The King naturally refused. Cortes grew angry. He was also very anxious. He felt the weakness of his position, with a handful of men in this great populous city, which he had sworn to win for Spain. The King must go. "Why do we waste time on this barbarian? Let us seize him and, if he resists, plunge our swords into his body!" cried the exasperated commander.

This is no place for the pathetic story of Montezuma's downfall. Prescott's "Conquest of Mexico" is within the reach of all. It tells of the Spanish treachery, of the refusal of the Mexican ruler to accept the new faith, of his final appeal to his subjects, of chains, degradation, and death. It tells of the three great heaps of gold, pearls, and precious stones taken by Cortes, of the final siege and conquest.

The news of this immense Mexican empire, discovered and conquered for Spain, brought honors from the King, Charles V., to the proud conqueror.

Nor did Cortes stop even after this achievement. As Governor and Captain-General of Mexico, he sent off ships to explore the neighboring coasts. Hearing that Honduras possessed rich mines and that a strait into the Pacific Ocean might be found, Cortes led an expedition by land. Arrived at Tabasco, he was provided with an Indian map of cotton cloth, whereon were painted all the towns, rivers, mountains, as far as Nicaragua. With this map and the mariner's compass, he led his army through gloomy woods so thick that no sun ever penetrated, and after a march of one thousand miles

reached the seacoast of Honduras, took over the country for Spain to be governed with Mexico by himself.

This enormous tract of country was known to the world as "New Spain."

EXPLORERS IN SOUTH AMERICA

THE success of Cortes and his brilliant conquest of Mexico gave a fresh impulse to discovery in the New World. The spirit of exploration dominated every adventurous young Spaniard, and among those living in the West Indies were many ready to give up all for the golden countries in the West, rumors of which were always reaching their ears.

No sooner had these rich lands been realized than the news of Magellan's great voyage revealed the breadth of the ocean between America and Asia, and destroyed forever the idea that the Spice Islands were near. Spanish enterprise lay in the same direction as heretofore, and we must relate the story of how Francisco Pizarro discovered Peru for the King of Spain. He had accompanied Balboa to Darien, and with him had gazed out on the unknown waters of the Pacific Ocean. With Balboa, after crossing the Isthmus of Darien, he had reached Panama on the South Sea, where he heard of a great nation far to the south. Like Mexico, it was spoken of as highly civilized and rich in mines of gold and silver. Many an explorer would have started off straightway for this new country, but there was a vast tract of dark forest and tangled underwood between Panama and Peru, which had damped the ardor of even the most ardent of Spanish explorers.

But Pizarro was a man of courage and dauntless resolution, and he was ready to do and dare the impossible. But, he made a bad beginning. A single ship with some hundred men aboard left Panama under his command in 1526. He was ignorant of southern navigation; the Indians along the shore were hostile; his men died one by one; the rich land of Peru was more distant than they had thought; and, having at length reached the island of Gallo near the equator, they awaited reinforcements from Panama. Great, then, was the

disappointment of Pizarro when only one ship arrived, and no soldiers. News of hardships and privations had spread through Panama, and none would volunteer to explore Peru.

By this time the handful of wretched men who had remained with Pizarro, living on crabs picked up on the shore, begged to be taken home—they could endure no longer. Then came one of those tremendous moments that lift the born leader of men above his fellows. Drawing his sword, Pizarro traced a line on the sand from east to west. "Friends," he cried, turning to the south, "on that side are toil, hunger, nakedness, the drenching storm, desertion, and death; and on this side ease and pleasure. There lies Peru with its riches; here Panama and its poverty. For my part, I go south."

So saying, he stepped across the line. Twelve stout-hearted men followed him. The rest turned wearily homeward. The reduced but resolute little party then sailed south, and a voyage of two days brought them within sight of the long-sought land of Peru. Communication with the natives assured them that here was fortune to be made, and they hurried back to Panama, whence Pizarro sailed for Spain, for permission to conquer the empire of Peru. It is interesting to find Cortes contributing some of his immense wealth from Mexico toward this new quest.

In February, 1531, three small ships, with one hundred and eighty soldiers and thirty-six horses, sailed south under Pizarro. But not until the autumn of 1532 was he ready to start on the great march to the interior. A city called Cuzco was the capital—the Holy City, with its great Temple of the Sun, the most magnificent building in the New World, had never yet been seen by Europeans. But the residence of the King was at Cajamarca, and this was the goal of the Spaniards for the present.

Already the news was spreading through the land that "white and bearded strangers were coming up from the sea, clad in shining panoply, riding upon unearthly monsters, and wielding deadly thunderbolts."

Pizarro's march to the heart of Peru with a mere handful of men was not unlike that of Cortes's expedition to Mexico.

Both coveted the rich empire of unknown monarchs, and dared all—to possess. Between Pizarro and his goal lay the stupendous mountain range of the Andes, or South American Cordilleras, rock piled upon rock, their crests of everlasting snow glittering high in the heavens. Across these and over narrow mountain passes the troops had now to pass. So steep were the sides that the horsemen had to dismount and scramble up, leading their horses as best they might. Frightful chasms yawned below them, terrific peaks rose above, and at any moment they might be utterly destroyed by bodies of Peruvians in overwhelming numbers. It was bitterly cold as they mounted higher and higher, till at last they reached the crest. Then began the descent, precipitous and dangerous. After seven days of this the valley of Cajamarca unrolled before their delighted eyes, and the little ancient city with its white houses lay glittering in the sun. But dismay filled the stoutest heart when, spread out below for several miles, tents as thick as snowflakes covered the ground. It was the Peruvian army. And it was too late to turn back. "So," says their narrator, "with as bold a countenance as we could, we prepared for our entrance into Cajamarca."

The Peruvians must already have seen the cavalcade of Spaniards as, with banners streaming and armor glistening in the rays of the evening sun, they followed Pizarro toward the city. As they drew near, the King, Atahualpa, covered with plumes of feathers and ornaments of gold and silver blazing in the sun, was carried forth on a throne, followed by thirty thousand men, to meet the strangers. It seemed to the Spanish leader that only one course was open. He must seize the person of this great ruler at once. He waved his white scarf. Immediately the cavalry charged and a terrible fight took place around the person of the ruler of Peru till he was taken prisoner.

Atahualpa tried to regain his liberty by the offer of gold, for he had discovered—amid all their outward show of religious zeal—a greed for wealth among these strange white men from over the seas. He suggested that he should fill with gold the room in which he was confined as high as he could

reach. Standing on tiptoe, he marked the wall with his hand. Pizarro accepted the offer, and the Spaniards greedily watched the arrival of their treasure. They gained a sum something like fifteen million dollars, and then put the King to death. Pizarro was the conqueror of Peru, and he had no difficulty in controlling the awestruck Peruvians, who regarded the relentless Spaniards as supernatural—the Children of the Sun indeed. A year later these "Children of the Sun" entered the old town of Cuzco—the capital of this rich empire—where they found a city of treasure surpassing all expectation.

As the shiploads of gold reached the shores of Spain, more and more adventurers flocked over to the New World. They swarmed into "Golden Castile," about the city of Panama, and journeyed into the interior of the yet new and unknown world. There are terrible stories of their greed and cruelty to the native Indians. One story says that the Indians caught some of these Spaniards, tied their hands and feet together, threw them on the ground, and poured liquid gold into their mouths, crying, "Eat, eat gold, Christian!"

Among other adventurers into South America at this time was Orellana, who crossed the continent from ocean to ocean. He accompanied one of Pizarro's brothers into the land of the cinnamon forests, and with him crossed the Andes in search of another golden kingdom beyond Quito. The expedition under Pizarro, consisting of some three hundred and fifty Spaniards, half of whom were horsemen, and four thousand Indians, set forward in the year 1540 to penetrate to the remote regions on the far side of the Andes. Their sufferings were intense. Violent thunderstorms and earthquakes terrified man and beast; the earth opened and swallowed up five hundred houses; rain fell in such torrents as to flood the land and cut off all communication between the explorers and cultivated regions. While they were crossing the lofty ridge of the Andes the cold was so intense that numbers of the party were literally frozen to death.

At length they reached the land of the cinnamon-trees, and, still pushing on, came to a river which must be crossed to reach the land of gold. They had finished their provisions,

and had nothing to subsist on now save the wild fruit of the country. After following the course of the river for some way, Pizarro decided to build a little vessel to search for food along the river. All set to work, Pizarro and Orellana, one of his chief captains, working as hard as the men. They set up a forge for making nails, and burned charcoal, with endless trouble owing to the heavy rains, which prevented the tinder from taking fire. They made nails from the shoes of the horses that had been killed to feed the sick. For tar they used the resin from the trees; for oakum they used blankets and old shirts. Then they launched the little home-made boat, thinking their troubles would be at an end. For some four hundred miles they followed the course of the river, but the supply of roots and berries grew scarcer, and men perished daily from starvation. So Pizarro ordered Orellana to go quickly down the river with fifty men to some inhabited land of which they had heard, to fill the boat with provisions, and return.

Off went Orellana down the river, but no villages or cultivated lands appeared; nothing was to be seen save flooded plains and gloomy, impenetrable forests. The river turned out to be a tributary of a much larger river. It was, indeed, the great river Amazon. Orellana now decided to go on down this great river and to desert Pizarro. His men were utterly weary, the current was too strong for them to row against, and they had no food to bring to their unhappy companions. Then there was the possibility of reaching the kingdom of gold for which they were searching. There were some among his party who objected strongly to the course proposed by Orellana, to whom he responded by landing them on the edge of the dense forest and there leaving them to perish of hunger.

It was on the last day of 1540 that, having eaten their shoes and saddles boiled with a few wild herbs, they set out to reach the kingdom of gold. It was truly one of the greatest adventures of the age, and historic, for here we get the word El Dorado, used for the first time in the history of discovery—the legendary land of gold that never was found, but which attracted all the Elizabethan sailors to this romantic country.

It would take too long to tell how they had to fight Indian tribes in their progress down the fast-flowing river; how they had to build a new boat, making bellows of their leather buskins, and manufacturing two thousand nails in twenty days; how they found women on the banks of the river fighting as valiantly as men, and named the new country the Amazon land; and how at last, after incredible hardships, they reached the sea in August, 1541. They had navigated some two thousand miles. They now made their rigging and ropes of grass and sails of blankets, and so sailed out into the open sea, reaching one of the West India islands a few days later.

And the deserted Pizarro? Tired of waiting for Orellana, he made his way sorrowfully home, arriving, after two years' absence in Peru, with eighty men left out of four thousand three hundred and fifty, all the rest having perished in the disastrous expedition.

Here we must leave the Spanish conquerors, still exploring, still conquering, in these parts, ever adding glory and riches to Spain. Indeed, Spain and Portugal, as we have seen, entirely monopolize the horizon of geographical discovery till the middle of the sixteenth century, when other nations enter the arena.

CABOT SAILS TO NEWFOUNDLAND

THE time came when it was no longer possible for Spain and Portugal to keep secret the wealth of the New World. English eyes were straining across the seas; English hands were ready to grasp the treasure that had been Spain's for fifty years. While Spain was sending Christopher Columbus to and fro across the Atlantic to the West Indies, while Portugal was rejoicing in the success of Vasco da Gama, John Cabot, in the service of England, was making his way from Bristol to the New World.

News of the first voyage of Columbus had been received by the Cabots—John and his son Sebastian—with boundless admiration. They believed with the rest of the world that the coast of China had been reached by sailing west. Bristol was at this time the chief seaport in England, and the center of trade for the Iceland fisheries. The merchants of the city had already ventured far on the Atlantic, and various little expeditions had been fitted out by them for possible discovery westward; but one after another the searchers failed, including the "most scientific mariner in all England," who went forth to find the island of Brazil to the west of Ireland, but, after nine miserable weeks at sea, was driven back to Ireland again by foul weather.

Now that Columbus had crossed the Atlantic, John Cabot got leave from the English King, Henry VII, "to sail to the east, west, or north, with five ships carrying the English flag, to seek and discover all the islands, countries, regions, or provinces of pagans in whatever part of the world." The King was to have one-fifth of the profits, and conflict with Spain must be avoided.

To fulfil his lord's commands, Cabot sailed off in a tiny ship with eighteen men. We have the barest outlines of his

proceedings. Practically all is contained in this one paragraph: "In the year 1497 John Cabot, a Venetian, and his son Sebastian discovered on the 24th of June, about five in the morning, that land to which no person had before ventured to sail, which they named Prima Vista or first seen, because, as I believe, it was the first part seen by them from the sea. The inhabitants use the skins and furs of wild beasts for garments, which they hold in as high estimation as we do our finest clothes. The soil yields no useful production, but it abounds in white bears and deer much larger than ours. Its coasts produce vast quantities of large fish—great seals, salmons, soles above a yard in length, and prodigious quantities of cod."

So much for the contemporary account of this historic voyage. A letter from England to Italy describes the effect of the voyage on England. "The Venetian, our countryman, who went with a ship from Bristol in quest of new islands, is returned and says that seven hundred leagues hence he discovered land, the territory of the Great Khan. He coasted for three hundred leagues and landed; he saw no human beings, but he has brought hither to the King certain snares which had been set to catch game and a needle for making nets. He also found some felled trees. Wherefore he supposed there were inhabitants, and returned to his ships in alarm. He was there three months on the voyage, and on his return he saw two islands to starboard, but would not land, time being precious, as he was short of provisions. He says the tides are slack and do not flow as they do here. The King of England is much pleased with this intelligence. The King has promised that in the spring our countryman shall have ten ships to his order, and at his request has conceded to him all the prisoners to man his fleet. The King has also given him money wherewith to amuse himself till then, and he is now at Bristol with his wife and sons. His name is Cabot, and he is styled the great Admiral. Vast honor is paid to him; he dresses in silk, and the English run after him like mad people."

Yet another letter of the time tells how "Master John Cabot has won a part of Asia without a stroke of the sword."

This Master John, too, "has the description of the world in a chart and also in a solid globe which he has made, and he shows where he landed. And they say that it is a good and temperate country, and they think that Brazil-wood and silks grow there, and they affirm that that sea is covered with fishes."

But Master John had set his heart on something greater. Constantly hugging the shore of America, he expected to find the island of Cipango (Japan) in the equinoctial region, where he should find all the spices of the world, and any amount of precious stones.

But, after all this great promise, Master John disappears from the pages of history and his son Sebastian continues to sail across the Atlantic, not always in the service of England, though in 1502 we find him bringing to the King of England three men taken in the Newfoundland, clothed in beasts' skins and eating raw flesh, and speaking a language which no man could understand. They must have been kindly dealt with by the King, for two years later the poor savages are "clothed like Englishmen."

Though England claimed the discovery of this Newfoundland, the Portuguese declared that one of their countrymen, Cortereal—a gentleman of the royal household—had already discovered the "land of the codfish" in 1463. But then, had not the Vikings already discovered this country five hundred years before?

DRAKE'S FAMOUS VOYAGE ROUND THE WORLD

DRAKE'S voyage (1577-80) was indeed famous, for although Magellan's ship had sailed round the world fifty years before, Drake was the first Englishman to do so; and further, he discovered land to the south of Magellan's Strait round which washed the waters of the Atlantic and Pacific Oceans, showing that the mysterious land marked on contemporary maps as Terra Australis, and joined to South America, was a separate land altogether. He also explored the coast of America as far north as Vancouver Island, and made known to England the secret of the Spice Islands.

The very name of Drake calls up a vision of thrilling adventure on the high seas. He had been at sea since he was a boy of fifteen, when he had been apprenticed to the master of a small ship trading between England and the Netherlands, and many a time he had sailed on the gray North Sea. "But the narrow seas were a prison for so large a spirit born for greater undertakings," and in 1567 we find Drake sailing forth on board the "Judith" in an expedition to the Spanish settlements in America, under his kinsman John Hawkins.

Having crossed the Atlantic and filled his ships with Spanish treasure from "the Spanish Main," and having narrowly escaped death at the hands of the Spaniards, Drake hurried home to tell of the riches of this new country still closed to all other nations. Two years later Drake was off again, this time in command of two ships with crews of seventy-three young men, their aim being nothing less than to seize one of the Spanish ports and empty into their holds the "Treasure House of the World."

What though this act of reckless daring proved unsuccess-

ADMIRAL SIR FRANCIS DRAKE.

ful? The undertaking was crowned with a higher success than that of gaining riches, for Drake was the first Englishman to see the waters of the Pacific Ocean. His expedition was not unlike that of Balboa some sixty years before, as with eighteen chosen companions Drake climbed the forest-clad spurs of the ridge dividing the two great oceans. Arrived at the top, he climbed a giant tree, and the Golden Sea of which he had so often heard—the Pacific Ocean of Magellan, the waters washing the golden shores of Mexico and Peru—all lay before him. Descending from the heights, he sank upon his knees and "humbly besought Almighty God of His goodness to give him life and leave to sail once in an English ship in that sea."

Jealously had the Spaniards guarded this beautiful Southern Sea; now its secrets were laid bare; for an Englishman had gazed upon it, and he was not likely to remain satisfied with this alone.

In 1573 Drake came home with his wonderful news, and it was not long before he was eagerly talking over with the Queen a project for a raid into this very Golden Sea guarded by the Spaniards. Elizabeth promised help on condition that the object of the expedition should remain a secret. Ships were bought for "a voyage to Egypt"—the "Pelican" of one hundred tons, the "Marygold" of thirty tons, and a provision ship of fifty tons. A fine new ship of eighty tons, the "Elizabeth," mysteriously added itself to the little fleet, and the crews numbered in all some one hundred and fifty men. No expense was spared in the equipment of the ships. Musicians were engaged for the voyage; the arms and ammunition were of the latest pattern. The flagship was lavishly furnished: there were silver bowls and mugs and dishes richly gilt and engraved with the family arms, while the commander's cabin was full of sweet-smelling perfumes presented by the Queen herself. Thus, complete at last, Drake led his gay little squadron out of Plymouth harbor on November 15, 1577, bound for Alexandria—so the crews thought.

Little did Drake know what was before him as, dressed in his seaman's shirt, his scarlet cap, with its gold band, on

his head, he waved farewell to England. Who could foresee the terrible beginning, with treachery and mutiny at work, or the glorious ending when the young Englishman sailed triumphantly home after his three years' voyage—the world encompassed?

The expedition having reached the Cape Verde Islands in safety, its object could no longer remain a secret, and Drake led his squadron boldly across the Atlantic Ocean.

On April 5 the coast of Brazil appeared, but fogs and heavy weather scattered the ships and they had to run into the mouth of the Rio de la Plata for shelter. Then for six weary weeks the ships struggled southward, battered by gales and squalls during which nothing but the daring seamanship of the English navigators saved the little vessels from destruction. On June 20 they reached Port S. Julian of Magellan fame, on the desolate shores of Patagonia.

Drake had long had reason to suspect the second in command, Doughty, although he was his dear friend. He had been guilty of worse than disobedience, and the very success of the voyage was threatened. So Drake called a council, and Doughty was tried according to English law. After two days' trial he was found guilty and condemned to die. One of the most touching scenes in the history of exploration now took place. We see the little English crews far away on that dreary shore, the ships lying at anchor in the harbor, the block prepared, the altar raised beside it, the two old friends, Drake and Doughty, kneeling side by side, then the flash of the sword, and Drake holding up the head of his friend with the words, "Lo, this is the end of traitors."

It was now midwinter there, and for six weeks they remained in harbor till August came, and with three ships they emerged to continue their way to the Strait of Magellan. At last it was found, and boldly they entered. From the towering mountains that guarded the entrance, tempests of wind and snow swept down upon the "daring intruders." As they made their way through the rough and winding waters, they imagined with all the other geographers of their time that the unknown land to the south was one great continent

leading beyond the boundaries of the world. Fires lighted by the natives on this southern coast added terror to the wild scene. But at the end of sixteen days the ships were once more in the open sea. They were at last on the Pacific Ocean. But it was anything but peaceful. A terrible tempest arose, followed by other storms no less violent, and the ships were driven helplessly south and west far beyond Cape Horn. When they once more reached the coast they found in place of the great southern continent an indented, wind-swept island shore, washed by waves terrific in their height and strength. In the ceaseless gale the "Marygold" foundered with all hands and was never heard of again. A week later the captain of the "Elizabeth" turned home, leaving the "Pelican," now called the "Golden Hind," to struggle on alone. After nearly two months of storm, Drake anchored south of anything yet known to the geographers, where Atlantic and Pacific rolled together in one boisterous flood. Walking alone to the farthest end of the island, Drake is said to have laid himself down and with his arms embraced the southernmost point of the known world.

He showed that Tierra del Fuego, instead of being part of a great continent—the Terra Australis—was a group of islands with open sea to east, south, and west. This discovery was first shown on a Dutch silver medallion struck in Holland about 1581, known as the Silver Map of the World. It may be seen to-day in the British Museum.

Remarking that the ocean he was now entering would have been better called "Mare Furiosum" than "Mare Pacificum," Drake now directed his course along the western coast of South America. He found the coast of Chile, but not as the general maps had described it; "wherefore it appeareth that this part of Chile hath not been truly hitherto discovered," remarked one on board the "Golden Hind." Bristling with guns, the little English ship sailed along the unknown coast, till they reached Valparaiso. Here they found a great Spanish ship laden with treasure from Peru. Quickly boarding her, the English sailors bound the Spaniards, stowed them under the hatches, and hastily transferred the cargo to the "Golden

Hind." They sailed on north to Lima and Panama, chasing the ships of Spain, plundering as they went, till they were deeply laden with stolen Spanish treasure, and knew that they had made it impossible to return home by that coast. So Drake resolved to go on northward and discover, if possible, a way home by the north.

As they approached the arctic regions the weather grew bitterly cold, and "vile, thick, stinking fogs" determined them to sail southward. They had reached a point near what we now know as Vancouver Island when contrary winds drove them back, and they put in at a harbor, now known as San Francisco, to repair the ship for the great voyage across the Pacific and home by the Cape of Good Hope. Drake had sailed past seven hundred miles of new coast-line in twelve days, and he now turned to explore the country, to which he gave the name of New Albion. The Indians soon gathered in large numbers on the shore, and the king himself, tall and comely, advanced in a friendly manner. Indeed, he took off his crown and set it on the head of Drake, and the Indians made him understand that the land was now his and that they were his vassals.

Little did King Drake dream, as he named his country New Albion, that California gold was so near. His subjects were loving and peaceable, evidently regarding the English as gods and reverencing them as such. The chronicler is eloquent in his detailed description of all the royal doings.

"Before we left," he says, "our General caused to be set up a monument of our being there, as also of her Majesty's right and title to that kingdom, namely, a plate of brass, fast nailed to a great and firm post, whereon is engraved her Grace's name and the day and year of our arrival here, and of the free giving up of the province, both by the people and king, into her Majesty's hands, together with her Highness's picture and arms in a piece of sixpence current money. The Spaniards never so much as set foot in this country—the utmost of their discoveries reaching only to many degrees southward of this place.

"And now, as the time of our departure was perceived

by the people, so did the sorrows and miseries seem to increase upon them—not only did they lose on a sudden all mirth, joy, glad countenance, pleasant speeches, agility of body, but with signs and sorrowings, with heavy hearts and grieved minds, they poured out woful complaints and moans, with bitter tears and wringing of their hands, tormenting themselves. And, as men refusing all comfort, they only accounted themselves as those whom the gods were about to forsake."

Indeed, the poor Indians looked on these Englishmen as gods; and when the day came for them to leave, the natives ran to the top of the hills to keep the little ship in sight as long as possible, after which they burned fires and made sacrifices at their departure.

Drake left New Albion on July 23, 1579, to follow the lead of Magellan and to pass home by the Southern Sea and the Atlantic Ocean. After sixty-eight days of quick and straight sailing, with no sight of land, they fell in with the Philippine Islands, and on November 3 with the famous Spice Islands. Here they were well received by the king—a magnificent person attired in cloth of gold, with bare legs and shoes of Cordova skins, rings of gold in his hair, and a chain "of perfect gold" about his neck. The Englishmen were glad enough to get fresh food after their long crossing, and they fared sumptuously on rice, hens, "imperfect and liquid sugar," sugar-cane, and a fruit called figo, with plenty of cloves. On a little island near Celebes, the "Golden Hind" was thoroughly repaired for her long voyage home. But the little treasure-laden ship was nearly wrecked before she got away from the dangerous shoals and currents of these islands.

"Upon the 9th of January," says the chronicler, "we ran suddenly upon a rock, where we stuck fast from eight of the clock at night till four of the clock in the afternoon the next day, being, indeed, out of all hope to escape the danger; but our General, as he had always hitherto showed himself courageous, so now he and we did our best endeavors to save ourselves, which it pleased God so to bless, that in the end we cleared ourselves most happily of the danger."

Then they ran across the Indian Ocean, rounded the Cape

of Good Hope in calm weather, abusing the Portuguese for calling it the most dangerous cape in the world for intolerable storms; for "This cape," said the English, "is a most stately thing and the finest cape we saw in the whole circumference of the earth."

And so they came home. After nearly three years' absence, Drake triumphantly sailed his little "Golden Hind" into Plymouth harbor, where he had long ago been given up as lost. Shouts of applause rang through the land at the news that an Englishman had circumnavigated the world. The Queen sent for Drake to tell his wonderful story, to which she listened spellbound. A great banquet was held on board the little ship, at which Elizabeth was present, and there she knighted Drake. She ordered that the "Golden Hind" should be preserved "as a worthy rival of Magellan's 'Victoria'" and as "a monument to all posterity of that famous and worthy exploit of Sir Francis Drake." The vessel was afterward taken to pieces, and the best parts of wood were made into a chair at Oxford, commemorated by Cowley's lines:

"To this great ship, which round the world has run,
And matched in race the chariot of the sun;
. . . . . .
Drake and his ship could ne'er have wished from fate
A happier station or more blest estate;
For lo, a seat of endless rest is given
To her in Oxford and to him in Heaven."

Sir Francis Drake died at sea in 1596.

"The waves became his winding-sheet, the waters were his tomb,
But for his fame the ocean sea was not sufficient room."

SIR WALTER RALEIGH SEARCHES FOR EL DORADO

IT is pleasant to follow the fortunes of that fine Elizabethan gentleman Sir Walter Raleigh to "the large, rich, and beautiful empire of Guiana and the Great and Golden City of Manoa," which the Spaniards call El Dorado.

Ever since the conquest of Peru, sixty years before, rumors had floated about of a great kingdom abounding in gold. We remember how this country was sought by Orellana and his men—how they suffered hardship, hunger, and some of them death, in their vain search for a land that did not exist.

The King of this Golden Land, it was said, was sprinkled daily with gold-dust, till he shone as the sun, while Manoa was full of golden houses and golden temples with golden furniture. The kingdom was wealthier than Peru; it was richer than Mexico! Expedition after expedition had left Spain in search of this El Dorado, but the region was still plunged in romantic mists.

Raleigh had just failed to establish an English colony in Virginia. To gain a rich kingdom for his Queen, to extend her power and enrich her treasury, was now his greatest object in life. What about El Dorado?

"Oh, unwearied feet, traveling ye know not whither! Soon, soon, it seems to you, you must come forth on some conspicuous hilltop, and but a little way farther, against the setting sun, descry the spires of El Dorado."

February, 1595, found him leaving England with five ships, and after a good passage of forty-six days he landed on the island of Trinidad, and thence he made his way to the mouth of the Orinoco. Here Raleigh soon found that it was impossible to enter the Orinoco with his ships, but, nothing daunted, he took a hundred men, with provisions for a month,

in three little open boats, and went forward to navigate this most difficult labyrinth of channels, out of which they were guided by an old Indian pilot named Ferdinando. They had much to observe. The natives living along the river-banks dwelt in houses all the summer, but in the winter months they built small huts, to which they ascended by means of ladders.

These folk were cannibals, but cannibals of a refined sort, who "beat the bones of their lords into powder" and mixed the powder with their drinks. The stream was very strong and rapid, and the men rowed against it in great discomfort, "the weather being extreme hot, the river bordered with very high trees that kept away the air, and the current against them every day stronger than the other," until they became, as Raleigh tells us, "wearied and scorched and doubtful."

The heat increased as they advanced, and the crews grew weaker as the river "ran more violently against them." But Raleigh refused to return yet, lest "the world would laugh them to scorn."

Fortunately, delicious fruits hung over the banks of the Orinoco, and, having no bread, and for water only the thick and troubled water of the river, they refreshed themselves gladly. So they rowed on up the great river, through province after province of the Indians, but no El Dorado appeared. Suddenly the scene changed as if by magic, the high banks giving way to low-lying plains; green grass grew close to the water's edge, and deer came down to feed.

"I never saw a more beautiful country," says Raleigh, "nor more lively prospects, hills raised here and there over the valleys, the river winding into different branches, plains without bush or stubble, all fair green grass, deer crossing our path, the birds toward evening singing on every tree with a thousand several tunes, herons of white, crimson, and carnation perching on the riverside, the air fresh with a gentle wind, and every stone we stooped to pick up promised either gold or silver."

His account of the great cataract at the junction of the tributary Caroni is very graphic. They heard the roar, and

ran to the tops of neighboring hills, discovering the wonderful "breach of waters" that ran down Caroni. From the heights, they saw "the river how it ran in three parts, about twenty miles off, and there appeared some ten or twelve overfalls in sight, every one as high over the other as a church tower, which fell with that fury that the rebound of waters made it seem as if it had been all covered over with a great shower or rain; and in some places," says Raleigh, "we took it at the first for a smoke that had risen over some great town."

The country was the province of Guiana, but it was not El Dorado, the object of their quest. And though it was very beautiful, it was inhabited by cannibals. Moreover, winter was advancing, and the explorers were already some four hundred miles from their ships, in little open boats and in the heart of a strange country.

Suddenly, too, the river began to rise, to "rage and overflow very fearfully." Rain came down in torrents, accompanied by great gusts of wind, and the crews, with no change of clothes, were wet through, sometimes ten times a day. "Whosoever had seen the fury of that river after it began to rise would perchance have turned his back somewhat sooner than we did if all the mountains had been gold or precious stones," remarked Raleigh, who indeed was no coward.

They turned the boats for home, and at a tremendous rate they spun down the stream, sometimes doing as much as one hundred miles a day, till after sundry adventures they safely reached their ships at anchor off Trinidad. Raleigh had not reached the golden city of Manoa, but he gave a very glowing account of this country to his Queen.

"Guiana," he tells her, "is a country that hath yet her maidenhood. The face of the earth hath not been torn, the graves have not been opened for gold. It hath never been entered by any army of strength, and never conquered by any Christian prince. Men shall find here more rich and beautiful cities, more temples adorned with gold, than either Cortes found in Mexico or Pizarro in Peru, and the shining glory of this conquest will eclipse all those of the Spanish nation."

But Raleigh had brought back no gold, and his schemes for a conquest of Guiana were received coldly by the Queen.

The Editors regret that space will not permit them to tell of other brave deeds of Sir Walter Raleigh. But one famous story of his young manhood must not be omitted.

One day the gate of the palace of Queen Elizabeth was flung open. First came forth the gentlemen of the Queen's household. Then came the great Queen herself, followed by the lords and ladies of her court. She looked a queen, indeed, as she passed, tall and stately, through the soldiers of the guard. She wore a dress of lovely satin, embroidered with pearls. Round her neck was a ruff of costly lace and diamonds sparkled in her ears and on her breast.

Behind the soldiers crowded the people, who had come just to catch a glimpse of their "Good Queen Bess" as she passed from the palace to her boat. In the very front of the crowd stood a tall, handsome young man. His bright eyes were fixed eagerly on the Queen as she came slowly toward him, smiling at the people as she passed. The young man was Walter Raleigh. As the Queen drew near the place where he stood she glanced at the ground and seemed to pause. Raleigh's quick eye saw that the ground at that place was muddy. Pushing past the guard, he flung from his shoulders his rich velvet cloak and spread it over the muddy spot. As he did so, he bowed low before the Queen, his plumed hat in his hand and the sun shining on his wavy, dark hair.

Looking up, he found the Queen was smiling graciously and thanking him for his courtesy. Then stepping gently on the cloak, she passed on and went on board her boat. Raleigh still stood where the Queen had left him. His face was glowing and his eyes were sparkling. Never would he forget this day when Queen Elizabeth herself had first spoken to him.

NOTE.—The reader will be interested in the "Historical Sketch of Arctic Exploration," which completes this volume; and in another volume of this series may be found chapters on Jacques Cartier, Samuel de Champlain, and David Livingstone, each of whom fills an important place in the history of discovery and exploration.

PUSHING PAST THE GUARD, HE FLUNG FROM HIS SHOULDERS HIS RICH VELVET CLOAK AND SPREAD IT OVER THE MUDDY SPOT.

AMERICA

FATHER MARQUETTE

By PAULINE C. BOUVÉ

WITH the first day of summer, when the rose-vines were hanging pink and crimson clusters of fragrant bloom along the old gray and war-scarred walls of Laon, in France, came a new life into the household of Nicolas Marquette, one of the wealthiest and most powerful gentlemen of the old fortress-town. This little life was destined to become a power in the world, for the new-born child in the Château Marquette, that first day of June in the year of our Lord 1637, was Jacques Marquette, who grew up to be the famous mission-priest to the American Indians, and the discoverer of the great Mississippi River.

This old town—now capital of the Department of Aisne in France—was a place of importance hundreds of years ago. Here the Romans, when they conquered Gaul, as France was then called, found a band of shepherds who wore clothing made of sheepskin, and who lived peacefully on the rocky heights of Laon. Remains of very ancient buildings may be seen here to-day—buildings the foundations of which were laid fifteen centuries ago. As the years passed, the abode of the shepherds changed in character and appearance. The bleating of lambs and the jingle of the sheep-bell were silenced by the sound of the mason's mallet and the builder's axe, for the early Frankish kings soon made a stronghold on the crest of the hill where the shepherds had tended their flocks, and upon the strong Rock of Laon they founded the "Castle of Laon."

Many times in the history of France was Laon besieged, but rarely was it taken. John the Fearless, Duke of Burgundy, stormed and took it in 1411. In 1419 the English took it, but they were driven out in 1429. One hundred and sixty-five years afterward, under Henry IV—in 1594—the fortress was taken by siege. Napoleon Bonaparte was defeated beneath its stone walls by Blücher in 1814, and in 1870 it capitulated to the Germans in the Franco-German war.

So we see that the old fortress-town in which little Jacques Marquette was born had been the scene of many a fierce and bloody conflict. But it had an interesting religious as well as military history. The Christian faith supplanted the myths of the savage Franks here in the third century, and to the rocky castle came the pious Saint Remy, the "Apostle to the Franks," in 515. The seeds of the Christian religion which he planted must have taken deep root in the rocky soil, for in the thirteenth century the Roman Church built a great cathedral at Laon, which is one of the first specimens of Gothic architecture in France to-day. Eighty-seven bishops have ruled over the diocese of Laon since those early days, and three popes, one of whom was the famous Urban IV., came from the ancient gray-walled city.

These things are interesting to know, because they had an influence on the life of the child whose early years were spent among surroundings that were full of the traditions of war and religion. Strange as it seems, these two things were very closely allied to each other a few hundred years ago.

On his father's side the boy was descended from a family which had always been on the side of the king in any quarrel that arose between the people and royalty, and which was allied by marriage to the nobility. On his mother's side he came down from the good Jean Baptiste de la Salle, the founder of the order of Brothers of Christian Schools, which gave free instruction to thousands of poor boys in France. So in the child's blood there were two strains—the high-born courage of the soldier and the patient endurance of the saint.

One can imagine how the stories of his ancestors, who had fought and died for the king, and the tales of the pious Saint

Remy, who had made Christians of the savage Frankish warriors, filled the imagination of the little boy as he plucked the roses from the crumbling walls of the ancient defense or sat among the dim shadows of the vaulted cathedral listening to the chant of priest and choir.

A strong desire to enter the religious life began to stir the heart and mind of the dreamy boy, and soon after his seventeenth birthday, October 8, 1654, he entered the Jesuit College at Havre as a novice. He was a student also at Pont-a-Mousson, and at both seats of learning he was distinguished for his scholarship and gentleness.

The Jesuit priests of France had reached Canada nearly ten years (1611) before the Pilgrims landed at Plymouth, and their object was to bring Christianity to the American Indians. Accounts of their work were sent to France by the priests in letters or documents called "relations," and these had filled the young priest of Laon with a desire to carry the story of Christ to the savages of the Western world.

In the year 1666, when he was just twenty-nine years old, the youthful "father" received the joyful tidings that he had been ordered to go to "New France," as Canada was then called. On September 20 of the same year he set sail for Quebec. In 1666 Quebec was not much of a city. It consisted of the Castle upon the cliff, the governor's house, the college of the Jesuits, the little convent of the Ursuline nuns, the church, and, at the foot of the bluffs, a few fur-traders' huts. The life in this settlement must have seemed strange to the young enthusiast, but he was not there long, for in a little while he was ordered to join Father Druillettes at Three Rivers, a mission on the northern bank of the St. Lawrence River, and about twenty-seven miles from Quebec.

Here he labored faithfully and cheerfully, acquiring a wonderful knowledge of the different dialects spoken by the various Indian tribes among whom he worked. The Jesuit authorities were not slow to see that the newcomer was specially fitted by nature for the service he had undertaken, for he was brave and gentle and wise; so in two years after going to Three Rivers he was sent to the farthest outpost of New

France, that wide waste of unexplored wilderness known as the "land of the Ottawas."

This was the first step toward that long and perilous journey that afterward made the names of Father Marquette and his brave companion, Louis Joliet, historic, and established for France the claim of having discovered the Mississippi River.

Although De Soto, the Spaniard, had discovered this great river nearly a century and a half before Father Marquette began to preach the gospel to the Indians of the Lake region, the discovery had been of little use. Nobody knew much about it, but roving tribes of natives sometimes brought wonderful stories of the great river, and the fur-traders sitting around their camp-fires at night often talked about the "mysterious lost sea," along whose shores, they believed, lay a wealth of forest and plain, teeming with flocks and herds and mines of precious metals.

Among these traders and adventurers was one man upon whom these tales made a deep impression. This was Louis Joliet, the son of a wagonmaker who was in the employment of the great fur-trading company which at that time controlled New France.

When Jacques Marquette was a little boy eight years old, playing about the walls of Laon, Louis Joliet, the wagonmaker's son, was born at the fort of the Rock of Quebec. This was in the year 1645. These two children, the one an aristocrat in one of France's oldest and most historic cities, the other the son of a laborer in the wilds of America, were destined to have their lives and fates forever linked together in the history of a great nation.

Louis Joliet studied for the priesthood (which he afterward abandoned), and it was as a clerk in the Jesuit College in Quebec that he became known to Father Marquette, the Jesuit missionary. Unlike as the two were in some respects, they were alike in possessing remarkable courage. The ambitious young agent for the fur-trading company was bent upon building up a name and fortune, and was eager to undertake any adventure that might lead to fame or wealth. The poetic young priest was eager to carry what was to him the true

faith to the wild nations, willing and even anxious to suffer death in so glorious a cause.

Count Frontenac, the governor of New France, had learned, too, of the wonderful "sea" that was supposed to flow through Virginia, and he also was eager to rediscover it and to claim its shores for France. Now the Jesuit priests were not always popular with the Indians. Indeed, the missionary required more tact, more wisdom, more patience, than the colonist. Father Marquette's extensive knowledge of the various dialects, and the fact that he was greatly loved by those Indians among whom he lived and taught, made it plain to the authorities of state and church that he was the man to be sent out on the quest of the "Southern Sea," for such a perilous journey meant constant intercourse with strange and unfriendly tribes.

For years the young priest had hoped that he might be sent out among these heathen people, and it had been his prayer that he might die alone in the wilderness, giving his life for the cause of Christ.

In the twentieth century this may appear strange, but in the seventeenth century men of all conditions were more willing to take risks than they are to-day, and those of the religious orders of Catholic France burned with a desire to suffer for their faith.

Father Marquette, or the "Black Gown," as the Indians called him, was very happy when he received orders to go with Joliet on the mysterious journey. At the mission of St. Ignace in Michigan, where he had worked with good Father Druillettes, the "Black Gown" was very sincerely loved. The mission was situated on the Michilimackinac, now called Mackinac. Lake Michigan flows through the Mackinac Straits to join Lake Huron, and is increased forty miles eastward by the waters of Lake Superior. The Indians thought that the island of Mackinac was a piece of floating land, sometimes near and sometimes far away. This was the effect of the mists that hung, sometimes heavily, sometimes lightly, and sometimes were entirely lifted from the beautiful island.

On May 17, 1673, Father Marquette and Louis Joliet,

together with the "donnés," or serving-men, and Indians, set out from Point St. Ignace to find the lost Mississippi. The story of that journey down the Wisconsin River until the broad bosom of the "Father of Waters" was reached is a story of adventurous daring rarely surpassed in the world's history.

Standing in the prow of the birch-bark canoe, in which the hazardous way was to be made, the "pale-faced priest and prophet," with his hand uplifted in benediction, bade farewell to the priests and to the dusky children of the forest, bidding them abide in the faith and telling them that he was ready "to do and to suffer all" that they and their brothers might become the children of the cross. Then, as stern-faced Joliet in his hunter's garb drew his beaver over his brows, the Indians and "donnés" shoved the frail barks off into the water, and the little band of explorers glided out upon the waves and soon vanished from the view of the watchers who stood upon the sandy beach of St. Ignace.

For days the plash of the oars was the only sound that broke the stillness, save the whir of birds in the dense forests that bordered the pathway the fragile boats followed, the cries of the wild woodland creatures, the sighing of the winds, and the lapping of the waves.

Their provision, consisting mainly of dried meats and maize bread, was neither large in quantity nor nourishing in quality, but when the explorers chose to beach their canoes and take a short rest there were always birds and fish enough to provide delicious suppers and breakfasts, so the question of food was easily settled by fishing-tackle or a sharpened arrow.

But there were perils ahead of the travelers. As they proceeded farther, tribes of savages sometimes attacked them, and not always did the uplifted cross in the hands of Father Marquette insure safety, though several times the good priest found that the symbol was understood. As their water route lay through the wide plains of the West, herds of buffaloes thundered across the long levels, astonishing and perhaps terrifying the white men who had never seen the strange creatures before. Down between wide plains, shadowy forests,

and marshes of wild rice the little boats passed onward until, one month from the day of their departure, they rocked on the waves of the broad Mississippi.

They had traveled a thousand miles through a strange land, and after much weariness and many dangers had reached their goal! And along the way Father Marquette had planted the cross and sown the seeds of the Christian faith. The Arkansas and the Illinois tribes had welcomed the "Black Gown" and asked him to remain with them, but Father Marquette thought it best to return to New France with the tidings of his discovery, and so after a short sojourn set the prows of his canoes homeward.

It was autumn now, and as they journeyed northward the exposure and fatigues of the journey began to tell upon the delicate constitution of the priestly commander, and the faithful "donnés" saw that their beloved leader was unable to continue the voyage.

Joliet was instructed to push forward and carry his papers and maps to Quebec. These papers were lost, however, by the upsetting of his boat. Father Marquette and his faithful followers took shelter along the coast. Here his illness increased, and it became evident that his end was near. A *coureur de bois,* a sort of trapper in the neighborhood of the miserable hut where the sick man lay, brought him food from time to time through the winter, and when spring came he seemed to improve, and resumed his journey. After a few days, however, he began to sink rapidly, and pointing to the shore, he asked to be taken to a certain spot. The place he indicated was where the city of Ludington, Michigan, now stands. Here, alone in the solitude of the American forests as he had wished might happen, he died on May 18, 1675. In a rude box of birch bark, the Indians for whom he had given his life, and who had learned to love him, bore his body back to St. Ignace, where with many solemn ceremonies it was buried in the vault of the church. In 1700 the Church of St. Ignace was burned, and the last resting-place of Marquette was lost sight of until the year 1877, when his remains were discovered by Father Jacker.

The rediscovery of the Mississippi River and the opening of its great basin to trade and commerce was one of the most remarkable achievements of the early settlers on American soil. But perhaps the most wonderful part of that beneficial service was, that the man who led the exploration was guided, not by motives of ambition or avarice, but by love of God and of the human race.

Born a Frenchman, Father Marquette, the hero-priest, by virtue of what he achieved in his ministry and his martyrdom on American soil, won for himself honor and fame more enduring than the monuments that grateful American citizens have erected to commemorate his character and his deeds.

AMERICA

THE STORY OF HENRY HUDSON

By BECKLES WILLSON

WHEN brave men first sailed across the broad Atlantic they had no thought of finding new lands. What they sought was a new way to the old and known land of India—a new way to the lands of spice and gold. When they reached America, many of those old sailors thought that they had reached India. But when the new land proved not to be India, they said: "These are but islands. Let us sail beyond them and still reach India."

Not until many voyages had been made, not until the white-winged ships had been turned back again and again from the rocky shores of America, were men convinced at last that these were no islands, but a vast continent which barred the way. Then the vision of a new way to India took another shape. Then began the quest for a narrow inlet or passage round or through the great continent. By sailing northwest it was hoped to find a way that, leading through snow and ice, should at last bring men beneath the glowing sun of India. And thus began the famous quest for the Northwest Passage. So it was that Englishmen, instead of making use of the lands which Cabot had found and claimed, almost forgot that claim and gave their lives and spent their gold trying still to find the new way to the land of sunshine.

Among the many brave men who sailed the seas in search of this passage we remember Henry Hudson, because he gave his name to a great inland sea in the north of America, and

to the strait leading to it, as well as to the noble river in New York in which the people of America take such pride. This he discovered in 1609.

Hudson sailed four times to the land of snow. There he met with Indians. On one voyage he gave them presents of hatchets, spades, and stockings. When he returned next time he was much amused to find that the Indians had hung the spades and hatchets round their necks as ornaments, and had made tobacco-pouches of the stockings. Amid much laughter the Englishmen put handles on the spades and shafts to the hatchets, and showed the simple savages their proper use by digging the ground and cutting down trees.

It is said that once when Hudson and his men landed, the Indians came about them, wondering at the great winged canoes and the pale faces of the men who had come in them. Hudson managed to make himself understood by the savages, and after a time he told them that he wanted some land, as he would like to live there. The red men did not wish to give him any land. "Then give me as much as this bullock-skin will enclose," said Hudson, throwing it down.

"Yes, you may have that," said the redskins, grinning and laughing at the white man's jest.

Then Hudson and his men began to cut the skin round and round into a long rope no thicker than a child's finger, being careful always not to break the rope. When it was finished they spread it out in a great circle enclosing a large piece of land.

The Indians were very much astonished when they saw how clever the white men were. They did not know that it was in this same way that the Britons had been cheated by the Saxons, hundreds of years before.

On April 17, 1610, Hudson, in the ship "Discovery," sailed out from the Thames. He had started upon his last voyage, from which he was never to return. Up to the north of Scotland steered the brave adventurers, then away to Greenland and the land of ice. When June came, and the birds were singing in the sunshine at home, these daring men were sailing a wintry sea where great ice-mountains floated.

These ice-mountains were a terrible danger, for suddenly one would overturn and plunge into the sea. Had the little ship been near, it would have been crushed beneath the falling mass and sunk in the icy waters. So the sailors tried to steer away from them. But ever thicker and faster they gathered around the ship.

With despair in his heart, but keeping a brave face, Hudson sailed on. But still thicker and thicker the cruel, white ice-mountains gathered. They were like a pack of giant wolves eager to crush the frail little vessel between their angry jaws. At last the ship was so shut in that it could move no more.

Then there were murmurs loud and angry among the crew. Hudson came to them. In his heart he never expected to see home again. Still he kept a brave face and tried to encourage his men. He brought his map and showed them that they had sailed farther into the land of ice and snow than any Englishman had done before. Was not that something to be proud of?

"Now will ye go on or will ye turn back?" he asked.

"Would that we were at home, aye, anywhere if only out of this ice," they replied.

"Why has the master brought us to die like dogs in this far North?"

"Had I a hundred pounds I would give ninety of them to be at home."

"But nay," said the carpenter, "had I a hundred pounds I would not give ten in such a cause. Rather would I keep my money, and by God's grace would bring myself and it safe home."

And so there was much useless talk and many angry words. But at length, leaving their grumbling, the men set to work to save the ship from the ice, and after much labor and time they cleared the ice-blocks and steered again into the open sea.

Then once more they sailed onward, escaping many dangers, enduring many hardships. Sometimes they saw land, sometimes there was only the sea around them. They suf-

fered from cold and hunger. In the ship at starting there was only food enough for six months. Now eight months had passed, it was November, and they were far from home. Their hands and feet were frost-bitten. Many of them fell ill and could work no more.

Hudson did all he could. He took great care of the food that was left, and he offered rewards to any of the men who should kill beast, bird, or fish. For they could not hope to live to see home again unless that they found much wild game to help out their scanty store of food. At one time they caught many sea-fowl; at another, they could only find moss and such poor plants as grew upon the snowy land. So the winter passed and spring came, and their store of food grew less and less.

They were fierce, unruly men, those daring sailors, and now they greeted their master with dark and sullen looks. They were starving, and they believed that he had stores of food which he kept hidden from them. So to quiet them Hudson served out a fortnight's bread at one time; but this made matters no better; they were so hungry that they could not make it last. The terrible gnawing pain was such that one man ate his whole fortnight's allowance in a day.

Louder grew the murmurs, darker the looks with which the master was greeted. Men met and whispered together in dim corners. They would no longer wait, they would no longer suffer, and at last their wicked plans were made. As Hudson stepped on deck early one June morning, two men seized him, while a third pinned his arms behind. In a few minutes he was bound and helpless.

"Men," he cried, "what is this? What do you mean?"

"You will soon see," they replied, "when you get into the boat."

Then, looking over the side, Hudson saw the ship's boat ready launched. He understood. These cruel men meant to turn him adrift on the icy waters.

But all were not against the master. One man who had a sword fought fiercely. But several of the mutineers threw themselves upon him and soon he too was bound. Another,

HENRY HUDSON AND SOME OF HIS CREW SET ADRIFT BY MUTINEERS

the carpenter, had been kept a prisoner below. Now he broke free and rushed on deck.

"Men," he cried, taking his stand beside the captain, "what are you doing? Do you all want to be hanged when you get home?"

"I care not," answered one; "of the two I would rather hang at home than starve abroad."

"Come, let be, you shall stay in the ship," said another.

"I will not stay unless you force me," boldly replied the carpenter as he faced the sullen, angry men. "I will rather take my fortune with my master."

"Go, then," they said, "we will not hinder you."

Then the sick and the lame were dragged out of their cabins and thrust into the boat along with Hudson and his son, not yet in his teens. Only one of the sick they did not send away. He crawled to the cabin door, and there, on his knees, he prayed the mutineers to repent of what they were doing. "For the love of God," he cried, "do it not."

"Keep quiet," they answered; "get into your cabin. No one is harming you."

At last, nine wretched men were packed into the little boat, then the ship moved out of the ice dragging it behind. As they sailed slowly along, Hudson and the other poor fellows were not without hope that the mutineers would relent and take them aboard again. But there was no chance of that. Even while Hudson was still upon the ship, some of the sailors had begun to break open the chests and rifle the stores. Now all law and order was at an end. They seized upon the food like hungry wolves. They sacked the ship as if it had been the fortress of an enemy. There was no thought of taking aboard again the master who had held them in check.

As they steered clear of the ice, a sailor leaned over the ship's side. He cut the rope that bound the little boat to the stern. Then they shook out their sails and fled as if from an enemy. Soon they vanished from sight, and the little boat was but a speck upon the cold gray waters.

That little boat was never seen again. What became of

brave Hudson and his son, of the gallant carpenter who stood by him, and of all the poor sick men thus cast adrift upon the icy waters, will never be known. Let us hope that death came to them quickly, that the waves upon which Hudson had loved to sail were kind to him, and that soon he found a grave beneath them. Where he lies we cannot tell, but the great bay and strait (as well as the beautiful river) that bear his name are a fitting monument for so gallant a sailor.

Of the mutineers, few reached home; some were killed in a fight with savages; others died from hunger and cold. The sufferings of those who remained were terrible. They had at length little to eat but candles. One of them, who lived to come home and who told the tale afterward, said that the bones of a fowl fried in candle-grease and eaten with vinegar made a very good dish.

At length the wretched men became so weak that they could no longer work the sails. Only one had strength to steer. They were but gaunt skeletons, haggard and pale, when their ship drifted to the coast of Ireland, and they at last reached home.

As soon as they arrived in England they were all put in prison, but they were soon set free again. Perhaps the sufferings through which they had passed had been punishment enough even for their ill deeds.

Our fathers died for England at the outposts of the world;
Our mothers toiled for England where the settlers' smoke upcurled;
By packet, steam, and rail,
By portage, trek, and trail,
They bore a thing called Honor in hearts that did not quail,
Till the twelve great winds of heaven saw the scarlet sign unfurled.

And little did they leave us of fame or land or gold;
Yet they gave us great possessions in a heritage untold;
For they said, "Ye shall be clean,
Nor ever false or mean,
For God and for your country and the honor of your queen,
Till ye meet the death that waits you with your plighted faith unsold.

"We have fought the long great battle of the liberty of man,
And only ask a goodly death uncraven in the van;
We have journeyed travel-worn
Through envy and through scorn,

And the faith that was within us we have stubbornly upborne,
For we saw the perfect structure behind the rough-hewn plan.

"We have toiled by land and river, we have labored on the sea;
If our blindness made us blunder, our courage made us free.
We suffered or we throve,
We delved and fought and strove;
But born to the ideals of order, law, and love,
To our birthright we were loyal, and loyal shall ye be!"

. . . . . .

O England, little mother by the sleepless northern tide,
Having bred so many nations to devotion, trust, and pride,
Very tenderly we turn
With willing hearts that yearn
Still to fence you and defend you; let the sons of men discern
Wherein our right and title, might and majesty, reside.

Bliss Carman.

AMERICA

LEWIS AND CLARK, TWO FAMOUS PATHFINDERS

AN expedition was sent out by President Jefferson in 1803, for the purpose of exploring the immense Louisiana territory which had recently been purchased from France. Captain Meriwether Lewis was entrusted with the command of the enterprise, with Captain William Clark as second in command. On July 5, 1803, Captain Lewis left Washington for Pittsburg, where he was to select his stores, outfit, and men. Owing to numerous delays, the expedition did not cross the Mississippi and enter the Missouri until the spring of 1804. They ascended the Missouri River to its source, crossed the Rocky Mountains, struck the head waters of the Columbia River, floated down that river, landing often to explore in the Oregon country, and reached the Pacific Ocean. They started for the East March 23, 1806, and reached Washington February 14, 1807, after an absence of nearly three and a half years, having traveled in all their long journey nearly 8,500 miles. They were the first white men to cross what is now the United States from the Mississippi River to the Pacific Ocean.

At times the explorers suffered terrible hardships and from April, 1805, to August, 1806, were shut off from all communication with the world. Lewis and Clark collected a mass of valuable information concerning the country through which they passed and the various Indian tribes they encountered. Captain Lewis wrote an interesting history of the expedition. Boys and girls will understand that this expedition did much more than simply cross the continent from the Mississippi

CAPT. MERIWETHER LEWIS.

CAPT. WILLIAM CLARK.

River to the Pacific Ocean. It was part of the duty of Captain Lewis and his assistant, Captain Clark, to note the mountains, valleys and rivers, and to draw maps of them; to discover and note the kinds of soil, trees, animals, and minerals that were found in different parts of the country; in short, they were to keep their eyes open, and on their return to tell the Government where they had been and what they had seen. From an article on these eminent pathfinders by an admirable writer we quote the following:

"Such wonders as they saw! There were antelopes and prairie dogs and other animals which were new to them. There were buffaloes so tame that they had to be driven out of the way with sticks and stones. There were brown bears and black bears and grizzly bears, all anxious to greet them with a hug. There were long marches over ground covered with sharp pieces of flint, and there were other marches over plains where the thorns of the prickly-pear pierced their shoes as if they were only paper. Captain Lewis once was separated from his men a few hours, and in that time he met a grizzly bear, a wolverene and three buffaloes, all of which showed fight. Again he lay down under a tree, and when he woke he found that he had a big rattlesnake for next-door neighbor. Getting food was not always an easy matter. They tried to make friends with the Indians wherever they went by giving them medals and other trinkets that they had brought. One Indian ate a piece of dried squash and said it was the best thing he had ever tasted except a lump of sugar that some member of the party had given him."

Our space will permit us to give only a short quotation from the interesting journal of Captain Lewis, all of which most boys and girls will want to read, and which in one or two volumes can be found in any library.

April 26th. We continued our voyage in the morning, and by twelve o'clock camped at eight miles distance, at the junction of the Missouri and Yellowstone rivers, where we were soon joined by Captain Lewis.

On leaving us yesterday he pursued his route along the

foot of the hills, which he descended to the distance of eight miles; from these the wide plains watered by the Missouri and the Yellowstone spread themselves before the eye, occasionally varied with the wood of the banks, enlivened by the irregular windings of the two rivers, and animated by vast herds of buffalo, deer, elk, and antelope. The confluence of the two rivers was concealed by the wood, but the Yellowstone itself was only two miles distant, to the south. He therefore descended the hills and camped on the bank of the river, having killed, as he crossed the plain, four buffaloes; the deer alone are shy and retire to the woods, but the elk, antelope, and buffalo suffered him to approach them without alarm, and often followed him quietly for some distance.

This morning he sent a man up the river to examine it, while he proceeded down to the junction. The ground on the lower side of the Yellowstone near its mouth is flat, and for about a mile seems to be subject to inundation; while that at the point of junction, as well as on the opposite side of the Missouri, is at the usual height of ten to eighteen feet above the water, and therefore not overflowed. There is more timber in the neighborhood of this place, and on the Missouri as far below as Whiteearth (Little Muddy) River, than on any other part of the Missouri on this side of the Cheyenne. . . .

This river, which had been known to the French as the *Roche jaune,* or as we have called it the Yellowstone, rises according to Indian information, in the Rocky Mountains [in the Yellowstone National Park]; its sources are near those of the Missouri and (not so near those of) the Platte; it may be navigated in canoes almost to its head. It runs first through a mountainous country, in many parts fertile and well-timbered; it then waters a rich, delightful land, broken into valleys and meadows, and well supplied with wood and water, till it reaches the Missouri open meadows and low grounds, sufficiently timbered on its borders. In the upper country its course is represented as very rapid; but during the two last and largest portions, its current is much more gentle than that of the Missouri, which it resembles also in being turbid, though with less sediment.

The man who was sent up the river reported in the evening that he had gone about eight miles; that during that distance the river winds on both sides of a plain four or five miles wide; that the current was gentle, and much obstructed by sand-bars; that at five miles he had met with a large timbered island, three miles beyond which a creek falls in on the S.E., above a high bluff, in which are several strata of coal. The country, as far as he could discern, resembled that of the Missouri, and in the plain he met several of the bighorn animals (*Ovis montana*) but they were too shy to be obtained.

The bed of the Yellowstone, as we observed it near the mouth, is composed of sand and mud, without a stone of any kind. Just above the confluence we measured the two rivers, and found the bed of the Missouri five hundred and twenty yards wide, the water occupying only three hundred and thirty, and the channel deep; while the Yellowstone, including its sand-bar, occupied eight hundred and fifty-eight yards, with two hundred and ninety-seven yards of water; the deepest part of the channel is twelve feet; but the river is now falling, and seems to be nearly at its summer height.

April 27th. We left the mouth of the Yellowstone. From the point of junction a wood occupies the space between the two rivers, which at the distance of a mile come within two hundred and fifty yards of each other. There a beautiful low plain commences, widening as the rivers recede, and extends along each of them for several miles, rising about half a mile from the Missouri into a plain twelve feet higher than itself. The low plain is a few inches above highwater mark, and where it joins the higher plain there is a channel of sixty or seventy yards in width, through which a part of the Missouri, when at its greatest height, passes into the Yellowstone. At two and one half miles above the junction, and between the high and low plain, is a small lake, two hundred yards wide, extending for a mile parallel with the Missouri along the edge of the upper plain.

At the lower extremity of this lake, about four hundred yards from the Missouri, and twice that distance from the Yellowstone, is a situation highly eligible for a trading estab-

lishment. This is in the high plain which extends back three miles in width, and seven or eight miles in length, along the Yellowstone, where it is bordered by an extensive body of woodland, and along the Missouri with less breadth, till three miles above it is circumscribed by the hills within a space four yards in width. A sufficient quantity of limestone for building may easily be procured near the junction of the rivers; it does not lie in regular strata, but is in large irregular masses, of a light color, and apparently of an excellent quality. Game is very abundant, and as yet quite gentle; above all, its elevation recommends it as preferable to the land at the confluence of the rivers, which their variable channels may render very insecure.

AMERICA

DANIEL BOONE

By PAULINE C. BOUVÉ

THE summer sunshine was sending long shafts of yellow light across the heart of the Yadkin River and far into the depths of the forests that bordered its banks, as a little band of travelers halted in an open space along the northern shore one day toward the middle of the eighteenth century. The line of wagons and pack-horses with their burdens of household goods proclaimed them at once a band of settlers, who had journeyed thither to make for themselves a new home in the Yadkin Valley of North Carolina. The travelers were weary, for they had come from Bucks County, Pennsylvania, over many hundreds of miles.

But Squire Boone and his wife and children were sturdy folk who were used to confronting danger and discomfort, and before long smoke-wreaths from the hearth-place of a new forest home were curling upward to the sky, while spade, axe, and such rude implements of toil as the settlers possessed were busily employed in "clearing a farm."

The forests around them were full of deer and wild turkeys, while deeper in the heart of the green solitude panthers, bears, and wolves still roamed at large.

"Daniel likes hunting better than work," said Farmer Boone one day, "so he can provide the table with meat"; and so it fell out that young Daniel Boone, at that time a lad of about nineteen—he was born in old Bucks County, February 11, 1735—began the life of a hunter—a life he was peculiarly fitted for by inborn capacity as well as inclination.

His skill as a marksman became a matter of wondering admiration to the settlers, among whom the use of a gun in those days was as much of a necessity as to know how to read and write is nowadays.

One morning he slung his powder-horn over his shoulder, armed himself with his rifle and his knife, and started off. This was so customary a thing that the family took no thought about him until the shadows of night began to close in upon them. The stars came out and made sparkling dots of light on the dimpled breast of the silvered water; the hooting of the owls and the croaking of innumerable frogs in the marshes mingled dismally with the long-drawn sighs of wind that swept through the pines and hemlocks, as the Boone family gathered about the door to watch for the familiar figure of the young hunter. All night they watched vainly, and the next day the alarmed father set forth, with some of the neighbors, in search of the lad.

Toward evening, just as the searching-party was growing discouraged, a light was observed. Following this faint glimmer, and calling loudly as they advanced, they soon came upon a rudely fashioned hut made of mud, stones, and pine boughs. In the center of the primitive abode a fire sent forth a cheerful blaze that lighted up the glowing avenues of the far-stretching forest, and before it sat Daniel Boone, calmly roasting a haunch of venison. Several skins of the victims of his trusty rifle lay spread out upon the ground, and the young hunter seemed happy and contented in the abode of bird and beast and that more dangerous two-footed enemy —the Indian.

This exploit was talked about at the schoolhouse, where Daniel was already a hero among the boys, who were eager to go "hunting with Dan" in season or out. It was during an expedition known among hunters as a fire-hunt that the young hunter was himself wounded, not by a gunshot, but by a little shaft from Cupid's dart. It happened in this way: Daniel and his comrade, as is the custom in a fire-hunt, started out one night to do what is called among frontier men "shining the eye." To do this, one man goes ahead

with an uplifted torch while his companion follows with a rifle cocked and primed. The glare of the pine torch reveals the bright eyes of the deer that may be lurking in the undergrowth. Fascinated by the unusual light, the bewildered, dazed animals remain fixed as statues, and of course are an easy prey for the marksman.

On this particular night Daniel was stealthily walking behind the torch-bearer when he suddenly perceived two brilliant eyes watching from a clump of bushes. Raising his gun, he was about to fire, when something peculiar in the deer's eyes struck him. *The eyes were blue!* He lowered his fowling-piece, and the startled creature disappeared in the darkness. "I'll follow that deer," said he, and he immediately gave chase. On, on went the deer, not toward the forest, but in the direction of a farmhouse! As he gained upon the deer the fence of farmer Bryan's "plantation" suddenly came into view. In a moment Daniel realized that it was not a deer, but a girl, he had so nearly shot! Following the maiden, he knocked at the cabin door, to find Rebecca Bryan, flushed and breathless, and telling her story of escape to the family.

"Rebecca," said Mr. Bryan, after Daniel had explained matters, "this is our neighbor's son, Daniel Boone." And so they met—these two who were afterward to join their lives and fates in a great and perilous undertaking; for bright-eyed Rebecca Bryan became the wife of the future pioneer.

It was not long after his marriage that young Boone met Finley, the noted hunter, who had pierced the wilds of Tennessee and Kentucky and had brought back thrilling stories of the buffalo-herds, the wonderful subterranean caverns, the plains of verdant grass, the rich soil, the tall sycamores towering up a hundred feet skyward, and the game, great and small, that awaited the coming of other hunters.

Finley told his tales of adventure sitting around the fireside of Daniel Boone's cabin, and the younger man's heart was filled with one mighty desire—the desire to go forth into the mysterious wilds of the western world beyond the mountains, beyond the reach of the new settlers who were now pouring into North Carolina from the more populous centers

of civilization. It was the spirit of the silent forest that was calling him, and he must obey. He must shoulder his rifle and hunt the big game among grassy plains, the jungle-like canebrakes of "Kain-tuc-kee—the Dark and Bloody Ground." He unfolded his plans to Finley, and the two men agreed to start westward as soon as the spring came. So, bidding good-by to Rebecca and the children, Daniel Boone and Finley set out upon their journey in the April of 1769.

This was the turning-point in Boone's life, and with that journey began Kentucky's history. It must have been a hard thing for his wife to see her husband start off for an unknown and distant destination with Finley and a few adventurous men, but she knew his courage and felt sure that he would do as he said, if God spared him—come back to her; so she kept back the tears and wore a brave face.

As Finley's party crossed the Cumberland Mountains and advanced into the country beyond, Daniel Boone was quick-witted enough to understand that while these great tracts of land belonged to none of the savage tribes exclusively, they must be the battle-grounds of the various clans of the different Indian natives who might wish to possess them. This thought made him fear danger of a surprise at every step, though there were no signs of Indians for some time. They had been traveling for some weeks, when one day Boone and a man by the name of Stewart started off together on an expedition, intending to go but a short distance from the rest of the party. The laurel trees were in bloom—

> "Lines of river and hill
> Made the heart of a wondrous picture,
> Tinted at Spring's sweet will."

As the hardy hunters stood drinking in the beauty about them, suddenly an arrow whizzed through the air, a war whoop sounded in their ears, and they were the prisoners of a large band of Indians, who marched them off in a direction opposite to that from which they had lately come. Knowing that any sort of resistance was probable death, Boone and Stewart resigned themselves with apparent cheerfulness. Any sign of fear would at once have brought upon them the

sentence of death by torture, for the American Indians have an absolute contempt for cowardice. Boone knew this; and, besides, he was born with a calm, indomitable courage that soon made itself felt.

For seven days the captives were marched onward, they knew not where. At last, one night the captors, having as they supposed made their prisoners secure, fell asleep. Boone and Stewart, who had pretended to sleep, waited till the deep breathing of the savages assured them that they were in a deep slumber, and then they signaled to each other that now they must make an effort to escape. Boone crept softly to Stewart's side and pointed to the firearms. Then each man grasped his gun and knife and stole out in the darkness. They knew they would be pursued as soon as their escape was discovered, so Boone and Stewart, who knew that recapture meant death by fire, made a great part of their escape through the water, so as to leave no scent of trail behind them. When they at last reached the camp from which they had started on the day of the capture, they found it deserted; their companions had been killed or had gone away. Soon after this, Squire Boone, Daniel's brother, followed Finley's party and with a companion found his way to his brother's encampment. Stewart had meantime been shot in a skirmish with the Indians, and Daniel, as a matter of protection, slept each night in a different spot.

The two brothers were overjoyed to meet once more, but it was plain that horses and other necessaries must be had in order to make a permanent settlement here. They talked the matter over, and Daniel agreed to stay while Squire and his companion went back to bring what was most needed.

No boy who has read the story of "Robinson Crusoe" can fail to appreciate what this situation was. Robinson Crusoe was stranded on a desert island by accident, but Daniel Boone remained by *choice* alone in the wilds of a region where no white man's foot had trod before, surrounded by savage beasts and more savage men—alone, without salt, sugar or food except what he could provide with his gun—and seven hundred miles from the nearest white inhabitant! Even the dog

followed Squire back. Daniel was alone. That was the courage of a hunter, a hero, above all, a pioneer!

Daniel Boone, the unlettered son of the forest, was opening the way to the civilization and settlement of the mighty West. The solitary hunter was unconsciously fulfilling a great mission. When Squire Boone came back he found his brother cheerful, contented, and happy, and unconscious that he was a hero.

After exploring the region, the brothers "blazed a route" —that is, they marked the trees—and then started to North Carolina for their families.

In the fall of 1773 the Boones, with their families and a band of eighty adventurous souls, set out, all bound for distant "Kain-tuc-kee." Hardships and perils beset the party. On October 10 they were attacked by Indians and six of the white men were killed, among whom was Daniel Boone's eldest son. Most of the party lost heart and returned to North Carolina. The Boones remained at Clinch River till June, 1774, when Lord Dunmore, governor of Virginia, appointed Daniel Boone to act as a guide to a band of surveyors who were going to the falls of the Ohio. This journey was accomplished successfully, and in sixty-two days Boone marched eight hundred miles on foot.

Disturbances were now continually breaking out between the frontier men and the Northwest Indians, and Lord Dunmore, who appreciated Boone's judgment, appointed him the commander of three frontier garrisons, giving him the commission of captain.

When Boonesborough was attacked, it was Daniel Boone who saved the garrison; and it was he who was the real hero at Vincennes when Governor Hamilton, the English general, surrendered there.

Honored by all who knew him, Colonel Boone, as he was now called, had taken up a large tract of land that he had purchased from the Transylvania Company; but when Kentucky was made a State, in 1792, trouble began about land-titles. The result was that Virginia declared the old titles worthless, speculators came in, and Daniel Boone, the Pioneer

of Kentucky, was made a beggar! He was an old man now, and disgusted with the injustice of the law, he decided to go into the Spanish possessions of Louisiana. Here the Spanish officials treated the great hunter with ceremonious respect. He was made commander of the St. Charles district in July, 1800; but when the United States government went into effect there in 1810, the gift of eight thousand acres of land made to him by Spain was revoked, and this man, who had given himself in the service of the country, was again reduced to beggary. Congress, after some bickering, agreed to let him have eight hundred and fifty acres of the original gift of the Spaniards, but Daniel Boone felt that he had been treated with cruel injustice. His wife died in 1813, and the old man was very lonely.

About this time the newspapers told a story that was widely copied—the story of the famous Daniel Boone having been found dead, with his rifle in his hand, aimed at a deer! "I would not have believed that story if I had told it myself," remarked the old man. "My eyesight is too poor to hunt now."

Daniel Boone died of fever at the home of his son-in-law, Mr. Calloway, in Charrette, Missouri, September 26, 1820, aged eighty-five years. It is said that the last words he uttered were: "Too crowded, too crowded, more elbow-room!"

Whether these really were his last words cannot now be known, but some such thought may have been in the mind of this child of the forest, this son of the soil, as he passed into the limitless Beyond. He was buried beside the faithful wife of his youth and sharer of his toils in Missouri; but in 1845 the people of Kentucky petitioned to have the bones of her pioneer brought back to rest in the soil his patience and courage had given them. The family consented, and with great pomp and ceremony Daniel Boone and Rebecca his wife were laid to rest in the cemetery at Frankfort, September 15, 1845.

Daniel Boone was simple, direct, bold, truthful, loyal—a friend to be loved, a foe to be feared. He was, in a childlike way, deeply religious in his nature, though he was never

attached to any religious sect. Standing five feet ten inches in his stockings, his erect figure was supple and strong from constant use of his muscles and the physical development of an outdoor life.

He hated the quibbles of the law, and could not bear the restraints of conventional life, but he was no misanthrope, and the injustice of Congress did not make him bitter or morose. He simply moved farther away from the haunts of men.

In his homespun garments, with his knife, gun, and powder-horn, Daniel Boone stands out as one of the most picturesque figures of our early times. Byron wrote a poem about him, Fenimore Cooper made him immortal in "Leatherstocking" and "The Pathfinder," and he is the hero-hunter and Indian-fighter to all succeeding generations of American boys; but his first title to fame lies in the might of the great West, whose gateway was opened by Daniel Boone, America's foremost pioneer!

AMERICA

KIT CARSON

By PAULINE C. BOUVÉ

IT was on Christmas Eve, in the year 1809, that a lonely log-cabin in Madison County, Kentucky, was the scene of unusual stir and excitement.

The doctor's horse stood at the door, and a motherly looking neighbor from some settler's cabin was presiding over the cradle where a new-born baby lay, red and wrinkled and crying after the fashion of all babies of all time. .

The children were hanging their stockings, maybe, by the big-throated chimney where an enormous fire of oak and hickory logs sent a cheerful glow over the room, glinting upon rifle, hunting-knives, powder-flasks, and deer-antlers that hung on the rough walls instead of pictures, and lighting up the eager, expectant faces of the children; for it was Christmas Eve and Santa Claus had sent a present in advance—the new baby. And a very happy present every one considered it.

For the time all thought of danger from the ever-lurking Indian was forgotten, for even in the wild pioneer days the Christmas season was observed along the southern frontier.

As the night drew on, the wailing of a wildcat or the cry of a wolf mingled with the wintry blast that swept through the great forest; but the children of settler Carson were used to such sounds. And indeed, it seems natural and fitting that the little Christopher, who was to become, perhaps, the most famous trapper and hunter of the West, should have been born in just such surroundings. A year later Mr. Carson, who had heard a great deal about the abundant game farther

west, undertook a journey thither, finally settling in Missouri, which was at that time called Upper Louisiana.

A few white people were scattered about in this unexplored wilderness, and these Mr. Carson persuaded to unite themselves into a settlement, in order that they might better protect themselves from the attacks of the Indians. Here little Kit Carson passed his early childhood. Here he learned to use his rifle so well that at the age of thirteen he was known for miles around as an unfailing marksman. Slight and fragile in physical make-up, the boy hunter possessed a great deal of endurance, courage, and judgment. Though his voice was singularly soft and sweet, there was a note of indomitable strength in it that soon made itself felt by those who heard it.

Mr. Carson wished Kit to be able in all circumstances to earn a living; so he apprenticed him to a saddler. But making harness and saddles was not to the liking of this young man, whom destiny had designed for a very different career. While Kit worked faithfully at his trade, his head was full of dreams of buffalo-hunts and Indian-fights and of wild adventures in the great country that lay toward the setting sun. Then one day a party of trappers came to the harness-maker's home, and the young apprentice offered his services to the leader, who agreed to take him with them. Santa Fé was the objective point of these fur-traders, and the proposed journey lay over a thousand miles and would be long and full of peril, but Kit cared nothing for the danger. His long dream was to come true and he was happy. In the expedition he learned much that was of use to him afterward.

Crossing the plains that lie between the Missouri River and the Rocky Mountains was a very different thing a hundred years ago from what it is to-day. And these traders bound for Santa Fé had adventures enough to fill a good many story-books, if one were to write them down. They were in rags when at last they reached their journey's end, and they had had some fighting with several hostile tribes. Sometimes they had to live upon roots and the under bark of trees. Some of the party became delirious from their sufferings, and one man, a Mr. Schenck, from Ohio, who had

been wounded, met a terrible fate. As he was unable to move along with the perishing party of men, it was at last decided that he should be left behind. His comrades could do nothing for him. They had not a scrap of food to give him, nor could they supply him with a drop of water. They were themselves actually perishing for food and drink in the great American desert! Without a word they tottered along, leaving their wounded comrade to die alone. Perhaps if they could push on and find water and game they might return and save him. At any rate, they must all die if help in the form of food did not come very soon.

Such scenes must have made a strong impression on the almost womanly nature of young Kit Carson; but nothing could quench his love for hunting and adventure, or his love for the wild woods.

After reaching Santa Fé, Kit decided not to return with the traders, but to push on farther still. It was during this solitary expedition that he met a mountaineer by the name of Kin Cade, with whom he lived for a while. Cade was a man rich in wood-lore, and an excellent companion for young Carson at this time of his life.

The old man and the boy took a great liking to each other, and as Kit could go out every morning and bring in enough food for a feast, there was no talk of board between them. Kin Cade spoke Spanish well, and Kit, who was naturally something of a scholar, also learned to speak it. When the snow fell and the wind whistled through the ravines, Kit and Kin would roast their game before a roaring fire and talk Spanish together; or when the long rainy days came they would make their clothes. Deerskins were deftly tanned for clothing, with ornamental fringes for coats and leggings and moccasins. While the tailors sat by the fire sewing, one of them was acquiring also a practical knowledge of the Spanish language and of geography; for Kin Cade had been a noted explorer, and he used to draw maps and charts on the floor with his stick as he told stirring tales of the "great Rockies."

His ability to learn from those about him helped to make

Kit Carson a great man; for in his own way he was undoubtedly great. After leaving Kin Cade, young Carson made a number of expeditions, very soon acquiring a wide reputation, among both Indians and the white settlers, as a trapper and a skilful guide.

But in all of his exploits he was prudent. For instance, he never would sleep where the camp-fire would shine on him, he always used his saddle as a shield as well as a pillow when he slept, and he was never without adequate means of defense.

It was when near the Spanish mission of San Rafael that Kit Carson became a popular hero for the first time. Some Indians had committed fearful and terrible cruelties on the defenseless mission, and had then taken refuge in a distant Indian village. If they should go unpunished, the white people would be in danger all the time, so the priests and inhabitants of the mission appealed to the body of trappers, with whom Kit Carson was employed, for help. Eleven volunteers were selected for this expedition, and Kit was intrusted with the command.

Since Kit appeared fragile as a girl, and had the low, sweet voice of a woman, this choice of a leader seemed strange; but the trappers were keen-witted, and they knew there was not so daring a soul among them as this gentle-mannered boy. They knew, too, that he had judgment, and the power of deciding instantly upon a course of action. The little band actually charged upon the Indian village, killed a large number and brought back the culprits as prisoners to the mission.

From this time on, Kit Carson became a power. If Indians stole the trappers' horses, it was Kit who was sent to get them back; if travelers brought tales of wrong done them by the red men, the boy hunter was selected to punish the wrongdoers; if, in short, there was any particularly dangerous thing to be done, it was the gentle-voiced Carson who had to take the matter in hand. And it is a strange but gratifying thing to relate that this young man, living this rude, adventurous life, was never known to take a profane oath upon his lips.

Many of the Indian tribes were friendly with the whites,

so it fell out that Kit Carson married an Indian maiden, with whom he lived very happily. She died in a few years, leaving a daughter, who was tenderly loved by her father. He afterward married a beautiful and accomplished Mexican girl, Josepha Jarimilla. From this marriage several children were born.

Carson had lived for sixteen years, as he said of himself, without looking upon the face of a white woman; and except on the rarest occasions he had eaten only such food as his rifle provided. At last a desire to see his old home came upon him; so, disposing of his furs, he set his face homeward. The scenes of his childhood were changed. Those whom he had known and loved were dead or had wandered into distant regions. He stopped for ten days in St. Louis, but the sights and sounds of the city wearied him. He longed for the freedom of his mountain life, and he engaged passage on the first steamboat going up the Missouri River. On board the vessel was a very striking-looking gentleman whose face attracted Carson. By some chance the two travelers were drawn into conversation. The older man was Lieutenant John C. Frémont, of the United States Corps of Topographical Engineers. He had been sent by the government to explore and report upon the "country between the frontiers of Missouri and the South Pass in the Rocky Mountains, on the line of the Kansas and Great Platte rivers." Kit Carson listened to what Lieutenant Frémont said, and then retired to a secluded spot on the steamer and thought for a while. Then he rose and approached his new acquaintance and said: "Sir, I have been for some time in the mountains, and think I can guide you to any point there you may wish to reach."

Frémont was a good deal surprised at this offer from a stranger, but there was something in the voice, the manner, the whole attitude of Carson that inspired confidence. The offer was accepted, and Kit Carson was at once engaged to guide the government party on its expedition to the Rocky Mountains. This was the beginning of our hero's services to the United States government. The office of guide over thousands of miles of unbroken wilderness carried a very grave

responsibility, but no man in America was better fitted to fill it than the soft-voiced Kit Carson.

This famous expedition began its march on June 10, 1842. In September the party reached the Rocky Mountains, where astronomical and geological observations were made for the report for the government. The party had heard alarming rumors of the hostile intentions of the Indians, who naturally enough did not wish them there; but Frémont had fearlessly pursued his course and accomplished his end. Kit Carson's services as hunter and guide were no longer needed, but he had been one of the instruments by which a great work had been done. Some time afterward he was again called upon by Frémont, whom he again guided. The war with Mexico was now about to break out, and it was here that Kit Carson, when General Kearny's force was surrounded by the Mexicans, near San Diego, and in a starving condition, offered to creep through the enemy's lines and get help from Commodore Stockton.

Ruin seemed inevitable. Carson broke the silence of the war-council by offering his services. "I am willing to try," he said in his gentle voice, and then Kearny knew that there was a chance yet for the American soldiers, for Kit Carson had never failed to accomplish any daring enterprise, however dangerous, that he had undertaken.

Young Beale of the Navy said: "I will go with him." And so those two heroes set out to work their way through the Mexican lines. Through the tall grass and the shade of the thickets they crawled by the lines of sentinels, and then, after a two days' march without food, they reached San Diego. Stockton sent a picked band of soldiers to Kearny's relief, and the American troops were not only saved, but enabled to defeat the Mexicans.

For his services to the Federal army in the Civil War, Kit Carson was made a brevet brigadier-general. He had done important work as a scout, had carried despatches at the peril of his life at every step, and the administration at Washington acknowledged this moccasined, leather-clad hunter as a hero.

A giant of a bully on one occasion tried to scare this man

of small stature by threatening him. He swaggered up to Carson and remarked: "These Americans are all cowards. I am going out into the brush to get some rods and I'll switch them every one."

Kit Carson looked up. "Captain Shuman," he said softly, "I am an American, and one of the smallest and weakest of them all. We have no disposition to quarrel with any one. But this conduct can no longer be endured. If it is continued, I shall be under the necessity of shooting you."

It must be remembered that this was in a wild, savage country, more than half a century ago. Time and place were not suited to cultivation of the gentlest manners.

The Goliath went off for his rifle. The David went for his. The two men rode toward each other. "Am I the person you are looking for?" asked Kit, as he approached the big fellow. "No," said the armed bully, who at the same instant aimed his gun. But Kit Carson was quick as a flash. With unerring aim he fired at Shuman's right wrist, which was shivered.

The gun fell from his broken arm, discharging its load in the air. From that day Captain Shuman fired no more guns and made no more threats.

But perhaps the greatest service of Kit Carson's useful life was that given alike to the Indians and the white men while he acted as Indian agent for the government. The Indians feared, respected, and loved "Father Kit," as they called him, and his wisdom averted many troubles and much bloodshed.

This remarkable man died at Fort Lyon, Colorado, May 23, 1868. His death was the result of an injury from a fall while riding in the mountains. His last words were a farewell to Assistant Surgeon Tilton, of the Army.

"Doctor, compadre, adios," he called out; and in a few moments he had breathed his last.

So died Kit Carson, the "Napoleon of the Wilderness," one of Nature's gentlemen, one of the world's heroes.

At the top of the splendid Pioneer Monument in Denver, Colorado, is the figure of this brave pioneer of pioneers. He is represented as a young man, mounted on his favorite horse,

his rifle held across the left arm, his uplifted right hand pointing beyond the Rocky Mountains, toward the western horizon. The sculptor's aim in this noble statue "was to sum up the sentiment of the whole Western movement—the 'call of the West'—'Westward ho!'"

AMERICA

THE COLORADO CLIFF-DWELLERS

By ALFRED TERRY BACON

WHEN the conquerors of Mexico reached the Seven Cities of Cibola (the buffalo), great in wealth and population, lying in the valley of the Rio de Zuñi, they found not cities, but rather villages of peaceful agricultural people dwelling in great pueblos three and four stories high, and they searched in vain for the rumored stores of gold. At that time the pueblos held a large population skilled in many arts of civilization. They cultivated large tracts of ground, wove fabrics of cotton, and produced ornate pottery. Their stone-masonry was admirable. But even three hundred years ago it seems that the people were but a remnant of what they had once been. Even then the conquerors wondered at the many ruins which indicated a decline from former greatness. The people have not now the same degree of skill in their native arts which the race once had, and it is probable that when the Spaniards came and found them declining in numbers the old handicrafts were already on the wane.

In a remote age the ancestors of these Pueblo tribes, or a race of kindred habits, filled most of that vast region which is drained by the Colorado River and its affluents, and spread beyond into the valley of the Rio Grande. The explorers of a great extent of country in Utah, Arizona, New Mexico, and Colorado have found everywhere evidences of the wide distribution and wonderful industry of that ancient people. On the low land which they used to till lie the remains of their villages—rectangular buildings of enormous dimensions

and large circular *estufas,* or halls for council and worship. On the sides of the savage cliffs that wall in or overarch the cañons are scattered in every crevice and wrinkle those strange and picturesque ruins which give us the name "Cliff-dwellers" to distinguish this long-forgotten people. And on commanding points, seen far away down the cañons or across the mesas, stand the solitary watch-towers where sentinels might signal to the villagers below on the approach of Northern barbarians. . . .

There is no other district which embraces in so small a compass so great a number and variety of the Cliff-dwellers' ruined work as the cañon of the Little Rio Mancos in Southwestern Colorado. The stream rises in a spur of the San Juan Mountains, near the remote mining-camp called Parrott City. Flowing southward for a few miles through an open valley, it is soon inclosed between the walls of a profound cañon which cuts for nearly thirty miles through a table-land called the Mesa Verde. The cañon is wide enough to have permitted the old inhabitants to plant their crops along the stream, and the cliffs rising on either side to a height of 2000 feet are so curiously broken and grooved and shelving, from the decay of the soft horizontal strata and the projection of the harder, as to offer remarkable facilities for building fortified houses hard of approach and easy of defense. Therefore the whole length of the cañon is filled with ruins, and for fifteen miles beyond it to the borders of New Mexico, where the river meets the Rio San Juan, the valley bears many traces of the ancient occupation.

The scenery of the cañon is wild and imposing in the highest degree. In the dry Colorado air there are few lichens or weather-stains to dull the brightness of the strata to the universal hoariness of moister climates; the vertical cliffs, standing above long slopes of débris, are colored with the brilliant tints of freshly quarried stone. A gay ribbon of green follows the course of the rivulet winding down through the cañon till it is lost to sight in the vista of crags. The utter silence and solitude of the wilderness reigns through the valley. It is not occupied by any savage tribe, and only

Copyright by Underwood & Underwood

BRIGHT ANGEL CAÑON FROM O'NEILL'S POINT,
GRAND CAÑON OF THE COLORADO.

a few white men within the last few years have passed through it and told of its wonders; and yet its whole length is but one series of houses and temples that were forsaken centuries ago. I can hardly imagine a more exciting tour of exploration than that which Mr. Jackson's party made on first entering this cañon in 1874.

Above the entrance of the cañon the evidences of prehistoric life begin. On the bottom-land, concealed by shrubbery, are the half-obliterated outlines of square and circular buildings. The houses were of large size, and were plainly no temporary dwelling-places, for an accumulation of decorated pottery fills the ground about them, indicating long occupation. No doubt they were built of adobe—masses of hard clay dried in the sun—which the wear of ages has reduced to smoothly-rounded mounds. For some miles down the cañon remains of this sort occur at short intervals, and at one point there stands a wall built of squared sandstone blocks. Along the ledges of the cliffs on the right bits of ruinous masonry are detected here and there, but for a time there is nothing to excite close attention. At last a watchful eye is arrested by a more interesting object perched at a tremendous height on the western wall of the cañon. It is a house built upon a shelf of rock between the precipices, but, standing seven hundred feet above the stream and differing not at all in color from the crags about it, only the sharpest eyesight can detect the unusual form of the building and the windows marking the two stories.

The climb up to the house-platform is slow and fatiguing, but the trouble is repaid by a sight of one of the most curious ruins on this continent. Before the door of the house, part of the ledge has been reserved for a little esplanade, and to make it broader three small abutments of stone, which once supported a floor, are built on the sloping edge of the rock. Beyond this the house is entered by a small aperture which served as a door. It is the best specimen of a Cliff-dweller's house that remains to our time. The walls are admirably built of squared stones laid in a hard white mortar. The house is divided into two stories of three rooms each. Behind it a

semicircular cistern nearly as high as the house is built against the side of it, and a ladder is arranged for descending from an upper window to the water-level. The floor of the second story was supported by substantial cedar timbers, but only fragments of them remain. The roof, too, has entirely disappeared, but the canopy of natural rock overhanging serves to keep out the weather. The front rooms in both stories are the largest and are most carefully finished. Perhaps they were the parlor and "best bedroom" of some prehistoric housewife. They are plastered throughout with fine, smooth mortar, and even in that remote age the mania for household decoration had a beginning; floor, walls, and ceiling were colored a deep red, surrounded by a broad border of white.

The same cliff on which this house stands has on its side many other ruins; some half destroyed by gradual decay, some crushed by falling rocks, none so perfect as the one described; but all are crowded into the strangest unapproachable crevices of the cañon-wall, like the crannies which swallows choose to hold their nests, far removed from the possibility of depredation. Some are so utterly inaccessible that the explorers, with all their enthusiasm and activity, have never been able to reach them. How any beings not endowed with wings could live at such points it is hard to conceive; it makes one suspicious that the Cliff-dwellers had not quite outgrown the habits of monkey ancestors.

As the cañon widens with the descent of the stream the ruins in the western wall increase in number. One fearful cliff a thousand feet in height is chinked all over its face with tiny houses of one room each, but only a few of them can be detected with the naked eye. One, which was reached by an explorer at the peril of his life, stands intact; ceiling and floor are of the natural rock, and the wall is built in a neat curve conforming to the shape of the ledge.

A mile farther down the stream there is a most interesting group of houses. Eight hundred feet above the valley there is a shelf in the cliff sixty feet in length that is quite covered by a house. The building contains four large rooms, a circular sacred apartment and smaller rooms of irregular

shape. It was called by its discoverers "The House of the Sixteen Windows." Behind this house the cliff-side rises smooth and perpendicular thirty feet, but it can be scaled by an ancient stairway cut into it which ascends to a still higher ledge. The stairs lead to the very door of another house filling a niche a hundred and twenty feet long. A great canopy of solid rock overarches the little fortress, reaching far forward beyond the front wall, while from below it is absolutely unapproachable except by the one difficult stairway of niches cut in the rock. In time of war it must have been impregnable. These dwellings have given more ideas about their interior furnishing than any of the others. Among the accumulated rubbish were found corn and beans stored away. In the lower house were two large water-jars of corrugated pottery standing on a floor covered with neatly woven rush matting. In a house not far above were found a bin of charred corn, and a polished hatchet of stone made with remarkable skill.

From this point onward both the valley and the cliffs are filled with the traces of a numerous population, every mile of travel bringing many fresh ones into sight. Among the cliff-houses there is of necessity a variety in form and size as great as the differences of the caves and crevices that hold them; but among the buildings of the low ground there is more uniformity, not only in this cañon but in all the valleys of the region. Most of them may be classed as aggregated dwellings or pueblos, with rectangular rooms, round watch-towers, and large circular buildings. To these must be added a few which seem to have been built only for defense. The straight walls have generally fallen, except the parts supported by an angle of a building; but, as usual in old masonry, the circular walls have much better resisted decay.

About midway down the cañon the curved wall of a large ruin rises above the thicket. It is a building of very curious design. The outer wall was an exact circle of heavy masonry a hundred and thirty feet in circumference. Within there is another circular wall, concentric with the outer,

inclosing one round room with a diameter of twenty feet. The annular space between the two walls was divided by partitions into ten small apartments. Other buildings of the same type occur in this region, some of much larger size and with triple walls. Even in this one, which is comparatively well preserved, the original height is uncertain, though the ruin still stands about fifteen feet high.

The vast quantity of débris about some of them indicates that they were of no significant height, and their perfect symmetry of form, the careful finish of the masonry, the large dimensions and great solidity, made them the most imposing architectural works of that ancient people. I find no reason to doubt that they were their temples, and the presumption is very strong that they were temples for sun-worship. The occurrence of a circular room in connection with nearly every group of buildings is of special interest, as seeming to link the Cliff-dwellers to the modern Pueblo tribes in their religious customs.

Most striking and picturesque of all the ruins are the round watch-towers. On commanding points in the valley, and on the highest pinnacles of the cliffs overlooking the surface of the mesa, they occur with a frequency which is almost pathetic as an indication of the life of eternal vigilance which was led by that old race through the years, perhaps centuries, of exterminating warfare which the savage red men from the North waged upon them. To us the suffering of frontier families at the hands of the same blood-thirsty savages is heartrending. What was it to those who saw year by year their whole race's life withering away, crushed by those wild tribes?

Near the lower end of the cañon stands one of the most perfect of these towers, rising sixteen feet above the mound on which it is built. It was once attached to an oblong stone building which seems to have been a strongly fortified house. The rectangular walls, as usual, are prostrate, and have left the tower standing as solitary and picturesque and as full of mystery as the round-towers of Ireland. . . .

In the Montezuma Cañon, just beyond the Colorado

State border, there are some remains built after an unusual manner with stones of great size. One building of many rooms, nearly covering a little solitary mesa, is constructed of huge stone blocks not unlike the prehistoric masonry of southern Europe. In the same district there is a ruined line of fortification from which the smaller stones have fallen away and are crumbling to dust, leaving only certain enormous upright stones standing. They rise to a height of seven feet above the soil, and the lower part is buried to a considerable depth. Their resemblance to the hoary Druidical stones of Carnac and Stonehenge is striking, and there is nothing in their appearance to indicate that they belong to a much later age than those primeval monuments of Europe.

All the certain knowledge that we have of the history and manners of the Cliff-dwellers may be very briefly told, for there is no written record of their existence except their own rude picture-writing, cut or painted on the cañon walls, and it is not likely that those hieroglyphics will ever be deciphered. But much may be inferred from their evident kinship to the Moquis of our time; and the resemblance of the ancient architecture and ceramics to the arts as they are still practised in the degenerate pueblos of Arizona gives us many intimations in regard to the habits of the Cliff-dwellers.

It was centuries ago—how long a time no one will ever know—when that old race was strong and numerous, filling the great region from the Rio Grande to the Colorado of the West, and from the San Juan Mountains far down into Northern Mexico. They must have numbered many hundreds of thousands, perhaps millions. It is not probable that they were combined under one government, or that they were even closely leagued together, but that they were essentially one in blood and language is strongly indicated by the similarity of their remains. They were of peaceful habits and lived by agriculture, having under cultivation many thousands of acres in the rich river-bottoms, which they knew well how to irrigate from streams swollen in summer by the melting snows of the high mountain-ranges. We read of their dry canals in Arizona, so deep that a mounted

horseman can hide in them. We know that they raised crops of corn and beans, and in the south cotton, which they skillfully wove. That they had commercial dealing across their whole country is shown by the quantity of shell-ornaments brought from the Pacific coast, which are found in their Colorado dwellings. They did not understand the working of metals, but their implements of stone are of most excellent workmanship. Their weapons indicate the practice of hunting, and while the race was still numerous their forts and their sharp obsidian arrows made easy their resistance to the wandering savage hordes.

I believe that no instance can be cited of a people still in their Stone Age who have surpassed that old race in the mason's art: indeed, I doubt if any such people has even approached their skill in that respect. The difficulty of constructing a great work of well-squared, hammer-dressed stones is enormously increased if the masons must work only with stone implements. Imagine the infinite, toilsome patience of a people who in such a way could rear the ancient Pueblo Bonito of New Mexico, five hundred and forty feet long, three hundred and fourteen feet wide, and four stories high! In one wall of a neighboring building of stone less carefully dressed it is estimated that there were originally no less than thirty million pieces, which were transported, fashioned, and laid by men without a beast of burden or a trowel, chisel, or hammer of metal. . . .

At the time of the Spanish conquest the Pueblo tribes were worshipers of the sun and fire, like all the races of this continent which were above barbarism. To-day, even in those pueblos where a corrupted form of the Roman faith is accepted, there are traces of the old sun-worship mingled with it, and in all pueblos there are large circular rooms, called estufas, reserved for councils and for worship. The invariable appearance of estufas among the ruined towns, and even on the ledges of the cliffs, shows what sacredness was attached to the circular room, which, perhaps, was symbolic of the sun's orb; it indicates a unity of religious faith between the ancients and moderns.

AMERICA

THE BUFFALO ON THE PLAINS

By FRANCIS PARKMAN

THE wagons one morning had left the camp; Shaw and I were already on horseback, but Henry Chatillon still sat cross-legged by the dead embers of the fire, playing pensively with the lock of his rifle, while his sturdy Wyandotte pony stood quietly behind him, looking over his head. At last he got up, patted the neck of the pony (whom, from an exaggerated appreciation of his merits, he had christened "Five Hundred Dollar"), and then mounted with a melancholy air.

"What is it, Henry?"

"Ah, I feel lonesome; I never been here before; but I see away yonder over the buttes, and down there on the prairie, black—all black with buffalo!"

In the afternoon he and I left the party in search of an antelope, until at the distance of a mile or two on the right the tall, white wagons and the little black specks of horsemen were just visible, so slowly advancing that they seemed motionless; and far on the left rose the broken line of scorched, desolate sand-hills. The vast plain waved with tall, rank grass that swept our horses' bellies; it swayed to and fro in billows with the light breeze, and far and near antelope and wolves were moving through it, the hairy backs of the latter alternately appearing and disappearing as they bounded awkwardly along; while the antelope, with the simple curiosity peculiar to them, would often approach us closely, their little horns and white throats just visible above

the grass tops, as they gazed eagerly at us with their round, black eyes.

I dismounted and amused myself with firing at the wolves. Henry attentively scrutinized the surrounding landscape; at length he gave a shout, and called on me to mount again, pointing in the direction of the sand-hills. A mile and a half from us two minute black specks slowly traversed the face of one of the bare, glaring declivities, and disappeared behind the summit. "Let us go!" cried Henry, belaboring the sides of Five Hundred Dollar; and I, following in his wake, we galloped rapidly through the rank grass toward the base of the hills.

From one of their openings descended a deep ravine, widening as it issued on the prairie. We entered it, and galloping up, in a moment were surrounded by the bleak sand-hills. Half of their steep sides were bare; the rest were scantily clothed with clumps of grass, and various uncouth plants, conspicuous among which appeared the reptile-like prickly-pear. They were gashed with numberless ravines; and as the sky had suddenly darkened, and a cold, gusty wind arisen, the strange shrubs and the dreary hills looked doubly wild and desolate. But Henry's face was all eagerness. He tore off a little hair from the piece of buffalo robe under his saddle and threw it up, to show the course of the wind. It blew directly before us. The game were therefore to windward, and it was necessary to make our best speed to get round them.

We scrambled from this ravine, and galloping away through the hollows, soon found another, winding like a snake among the hills, and so deep that it completely concealed us. We rode up the bottom of it, glancing through the shrubbery at its edge, till Henry abruptly jerked his rein and slid out of his saddle. Full a quarter of a mile distant, on the outline of the farthest hill, a long procession of buffalo were walking, in Indian file, with the utmost gravity and deliberation; then more appeared, clambering from a hollow not far off, and ascending, one behind the other, the grassy slope of another hill; then a shaggy head and a pair of short, broken horns appeared issuing out of a ravine close at hand, and with a slow,

BUFFALO IN THE CANADIAN NATIONAL PARK.

stately step, one by one, the enormous brutes came into view, taking their way across the valley, wholly unconscious of an enemy. In a moment Henry was worming his way, lying flat on the ground, through grass and prickly-pears, toward his unsuspecting victims. He had with him both my rifle and his own. He was soon out of sight, and still the buffalo kept issuing into the valley. For a long time he was silent; I sat holding his horse, and wondering what he was about, when suddenly, in rapid succession, came the sharp reports of the two rifles, and the whole line of buffalo, quickening their pace into a clumsy trot, gradually disappeared over the ridge of the hill. Henry rose to his feet and stood looking after them.

"You have missed them," said I.

"Yes," said Henry; "let us go." He descended into the ravine, loaded the rifles and mounted his horse.

We rode up the hill after the buffalo. The herd was out of sight when we reached the top, but lying on the grass, not far off, was one quite lifeless, and another violently struggling in the death agony.

"You see, I miss him!" remarked Henry. He had fired from a distance of more than a hundred and fifty yards, and both balls had passed through the lungs—the true mark in shooting buffalo.

The darkness increased, and a driving storm came on. Tying our horses to the horns of the victims Henry began the bloody work of dissection, slashing away with the science of a connoisseur, while I vainly endeavored to imitate him. Old Hendrick recoiled with horror and indignation when I endeavored to tie the meat to the strings of rawhide, always carried for this purpose, dangling at the back of the saddle. After some difficulty we overcame his scruples, and heavily burdened with the more eligible portions of the buffalo we set out on our return. Scarcely had we emerged from the labyrinth of gorges and ravines, and issued upon the open prairie, when the pricking sleet came driving, gust upon gust, directly in our faces. It was strangely dark, though wanting still an hour of sunset. The freezing storm soon pen-

etrated to the skin, but the uneasy trot of our heavy-gaited horses kept us warm enough, as we forced them unwillingly in the teeth of the sleet and rain by the powerful suasion of our Indian whips. The prairie in this place was hard and level. A flourishing colony of prairie dogs had burrowed into it in every direction, and the little mounds of fresh earth around their holes were about as numerous as the hills in a cornfield; but not a yelp was to be heard; not the nose of a single citizen was visible; all had retired to the depths of their burrows, and we envied them their dry and comfortable habitations. An hour's hard riding showed us our tent dimly looming through the storm, one side puffed out by the force of the wind, and the other collapsed in proportion, while the disconsolate horses stood shivering close around, and the wind kept up a dismal whistling in the boughs of three old half-dead trees above. Shaw, like a patriarch, sat on his saddle in the entrance, with a pipe in his mouth, and his arms folded, contemplating, with cool satisfaction, the piles of meat that we flung on the ground before him. A dark and dreary night succeeded; but the sun rose with a heat so sultry and languid that the captain excused himself on that account from waylaying an old buffalo bull, who with stupid gravity was walking over the prairie to drink at the river. So much for the climate of the Platte!

But it was not the weather alone that had produced this sudden abatement of the sportsmanlike zeal which the captain had always professed. He had been out on the afternoon before, together with several members of his party; but their hunting was attended with no other result than the loss of one of their best horses, severely injured by Sorel, in vainly chasing a wounded bull. The captain, whose ideas of hard riding were all derived from transatlantic sources, expressed the utmost amazement at the feats of Sorel, who went leaping ravines, and dashing at full speed up and down the sides of precipitous hills, lashing his horse with the recklessness of a Rocky Mountain rider. Unfortunately for the poor animal he was the property of R., against whom Sorel entertained an unbounded aversion. The captain himself, it

seemed, had also attempted to "run" a buffalo, but though a good and practised horseman he had soon given over the attempt, being astonished and utterly disgusted at the nature of the ground he was required to ride over.

Nothing unusual occurred on that day; but on the following morning Henry Chatillon, looking over the ocean-like expanse, saw near the foot of the distant hills something that looked like a band of buffalo. He was not sure, he said, but at all events, if they were buffalo, there was a fine chance for a race. Shaw and I at once determined to try the speed of our horses.

"Come, captain; we'll see which can ride hardest, a Yankee or an Irishman."

But the captain maintained a grave and austere countenance. He mounted his led horse, however, though very slowly; and we set out at a trot. The game appeared about three miles distant. As we proceeded the captain made various remarks of doubt and indecision; and at length declared he would have nothing to do with such a breakneck business; protesting that he had ridden plenty of steeplechases in his day, but he never knew what riding was till he found himself behind a band of buffalo day before yesterday. "I am convinced," said the captain, "that 'running' is out of the question. Take my advice now and don't attempt it. It's dangerous, and of no use at all."

"Then why did you come out with us? What do you mean to do?"

"I shall 'approach,'" replied the captain.

"You don't mean to 'approach' with your pistols, do you? We have all of us left our rifles in the wagons."

The captain seemed staggered at the suggestion. In his characteristic indecision, at setting out, pistols, rifles, "running" and "approaching" were mingled in an inextricable medley in his brain. He trotted on in silence between us for a while; but at length he dropped behind, and slowly walked his horse back to rejoin the party. Shaw and I kept on; when lo! as we advanced, the band of buffalo were transformed into certain clumps of tall bushes, dotting the prairie

for a considerable distance. At this ludicrous termination of our chase we followed the example of our late ally, and turned back toward the party. . . .

We encamped that night upon the bank of the river. Among the emigrants there was an overgrown boy, some eighteen years old, with a head as round and about as large as a pumpkin, and fever-and-ague fits had dyed his face of a corresponding color. He wore an old white hat, tied under his chin with a handkerchief; his body was short and stout, but his legs of disproportioned and appalling length. I observed him at sunset, breasting the hill with gigantic strides, and standing against the sky on the summit like a colossal pair of tongs. In a moment after we heard him screaming frantically behind the ridge, and nothing doubting that he was in the clutches of Indians or grizzly bears, some of the party caught up their rifles and ran to the rescue. His outcries, however, proved but an ebullition of joyous excitement; he had chased two little wolf pups to their burrow, and he was on his knees, grubbing away like a dog at the mouth of the hole, to get at them.

Before morning he caused more serious disquiet in the camp. It was his turn to hold the middle guard; but no sooner was he called up than he coolly arranged a pair of saddle-bags under a wagon, laid his head upon them, closed his eyes, opened his mouth, and fell asleep. The guard on our side of the camp, thinking it no part of his duty to look after the cattle of the emigrants, contented himself with watching our own horses and mules; the wolves, he said, were unusually noisy; but still no mischief was anticipated until the sun rose, and not a hoof or horn was in sight! The cattle were gone! While Tom was quietly slumbering the wolves had driven them away.

Then we reaped the fruits of R.'s precious plan of traveling in company with emigrants. To leave them in their distress was not to be thought of, and we felt bound to wait until the cattle could be searched for, and, if possible, recovered. But the reader may be curious to know what punishment awaited the faithless Tom. By the wholesome law of

the prairie he who falls asleep on guard is condemned to walk all day, leading his horse by the bridle, and we found much fault with our companions for not enforcing such a sentence on the offender. Nevertheless, had he been of our own party, I have no doubt he would in like manner have escaped scot-free. But the emigrants went farther than mere forbearance; they decreed that since Tom couldn't stand guard without falling asleep, he shouldn't stand guard at all, and henceforward his slumbers were unbroken. Establishing such a premium on drowsiness could have no very beneficial effect upon the vigilance of our sentinels; for it is far from agreeable, after riding from sunrise to sunset, to feel your slumbers interrupted by the butt of a rifle nudging your side, and a sleepy voice growling in your ear that you must get up, to shiver and freeze for three weary hours at midnight.

"Buffalo! buffalo!" It was but a grim old bull, roaming the prairie by himself in misanthropic seclusion; but there might be more behind the hills. Dreading the monotony and languor of the camp, Shaw and I saddled our horses, buckled our holsters in their places, and set out with Henry Chatillon in search of the game. Henry, not intending to take part in the chase, but merely conducting us, carried his rifle with him, while we left ours behind as incumbrances. We rode for some five or six miles, and saw no living thing but wolves, snakes, and prairie dogs.

"This won't do at all," said Shaw.

"What won't do?"

"There's no wood about here to make a litter for the wounded man; I have an idea that one of us will need something of the sort before the day is over."

There was some foundation for such an apprehension, for the ground was none of the best for a race, and grew worse continually as we proceeded; indeed it soon became desperately bad, consisting of abrupt hills and deep hollows, cut by frequent ravines not easy to pass. At length, a mile in advance, we saw a band of bulls. Some were scattered grazing over a green declivity, while the rest were crowded more densely together in the wide hollow below. Making a circuit

to keep out of sight we rode toward them until we ascended a hill within a furlong of them, beyond which nothing intervened that could possibly screen us from their view. We dismounted behind the ridge just out of sight, drew our saddle-girths, examined our pistols, and mounting again, rode over the hill, and descended at a canter toward them, bending close to our horses' necks. Instantly they took the alarm; those on the hill descended; those below gathered into a mass and the whole got in motion, shouldering each other along at a clumsy gallop. We followed, spurring our horses to full speed; and as the herd rushed, crowding and trampling in terror through an opening in the hills, we were close at their heels, half-suffocated by the clouds of dust. But as we drew near, their alarm and speed increased; our horses showed signs of the utmost fear, bounding violently aside as we approached, and refusing to enter among the herd. The buffalo now broke into several small bodies, scampering over the hills in different directions, and I lost sight of Shaw; neither of us knew where the other had gone. Old Pontiac ran like a frantic elephant up-hill and down-hill, his ponderous hoofs striking the prairie like sledge-hammers. He showed a curious mixture of eagerness and terror, straining to overtake the panic-stricken herd, but constantly recoiling in dismay as we drew near. The fugitives, indeed, offered no very attractive spectacle, with their enormous size and weight, their shaggy manes and the tattered remnants of their last winter's hair covering their backs in irregular shreds and patches, and flying off in the wind as they ran. At length I urged my horse close behind a bull, and after trying in vain, by blows and spurring, to bring him alongside, I shot a bullet into the buffalo from this disadvantageous position. At the report Pontiac swerved so much that I was again thrown a little behind the game. The bullet, entering too much in the rear, failed to disable the bull, for a buffalo requires to be shot at particular points, or he will certainly escape. The herd ran up a hill, and I followed in pursuit. As Pontiac rushed headlong down on the other side, I saw Shaw and Henry descending the hollow on the right at a leisurely gallop; and in front,

the buffalo were just disappearing behind the crest of the next hill, their short tails erect, and their hoofs twinkling through a cloud of dust.

At that moment I heard Shaw and Henry shouting to me; but the muscles of a stronger arm than mine could not have checked at once the furious course of Pontiac, whose mouth was as insensible as leather. Added to this, I rode him that morning with a common snaffle, having the day before, for the benefit of my other horse, unbuckled from my bridle the curb which I ordinarily used. A stronger and hardier brute never trod the prairie; but the novel sight of the buffalo filled him with terror, and when at full speed he was almost uncontrollable. Gaining the top of the ridge, I saw nothing of the buffalo; they had all vanished amid the intricacies of the hills and hollows. Reloading my pistols, in the best way I could, I galloped on until I saw them again scuttling along at the base of the hill, their panic somewhat abated. Down went old Pontiac among them scattering them to the right and left, and then we had another long chase. About a dozen bulls were before us, scouring over the hills, rushing down the declivities with tremendous weight and impetuosity, and then laboring with a weary gallop upward. Still Pontiac, in spite of spurring and beating, would not close with them. One bull at length fell a little behind the rest, and by dint of much effort I urged my horse within six or eight yards of his side. His back was darkened with sweat; he was panting heavily, while his tongue lolled out a foot from his jaws. Gradually I came up abreast of him, urging Pontiac with leg and rein nearer to his side, when suddenly he did what buffalo in such circumstances will always do; he slackened his gallop, and turning toward us, with an aspect of mingled rage and distress, lowered his huge shaggy head for a charge. Pontiac, with a snort, leaped aside in terror, nearly throwing me to the ground, as I was wholly unprepared for such an evolution. I raised my pistol in a passion to strike him on the head, but thinking better of it, fired the bullet after the bull, who had resumed his flight, then drew rein and determined to rejoin my companions. It was

high time. The breath blew hard from Pontiac's nostrils, and the sweat rolled in big drops down his sides; I myself felt as if drenched in warm water. Pledging myself (and I redeemed the pledge) to take my revenge at a future opportunity, I looked round for some indications to show me where I was, and what course I ought to pursue; I might as well have looked for landmarks in the midst of the ocean. How many miles I had run, or in what direction, I had no idea; and around me the prairie was rolling in steep swells and pitches, without a single distinctive feature to guide me. I had a little compass hung at my neck; and ignorant that the Platte at this point diverged considerably from its easterly course, I thought that by keeping to the northward I should certainly reach it. So I turned and rode about two hours in that direction. The prairie changed as I advanced, softening away into easier undulations, but nothing like the Platte appeared, nor any sign of a human being; the same wild, endless expanse lay around me still, and to all appearance I was as far from my object as ever. I began now to consider myself in danger of being lost, and therefore, reining in my horse, summoned the scanty share of woodcraft that I possessed (if that term be applicable upon the prairie) to extricate me. Looking round, it occurred to me that the buffalo might prove my best guides. I soon found one of the paths made by them in their passage to the river; it ran nearly at right angles to my course; but turning my horse's head in the direction it indicated, his freer gait and erected ears assured me that I was right.

But in the meantime my ride had been by no means a solitary one. The whole face of the country was dotted far and wide with countless hundreds of buffalo. They trooped along in files and columns—bulls, cows, and calves—on the green faces of the declivities in front. They scrambled away over the hills to the right and left; and far off, the pale blue swells in the extreme distance were dotted with innumerable specks. Sometimes I surprised shaggy old bulls grazing alone, or sleeping behind the ridges I ascended. They would leap up at my approach, stare stupidly at me through their tangled

manes, and then gallop heavily away. The antelope were very numerous; and as they are always bold when in the neighborhood of buffalo, they would approach quite near to look at me, gazing intently with their great round eyes, then suddenly leap aside, and stretch lightly away over the prairie, as swiftly as a racehorse. Squalid, ruffian-like wolves sneaked through the hollows and sandy ravines. Several times I passed through villages of prairie dogs, who sat, each at the mouth of his burrow, holding his paws before him in a supplicating attitude, and yelping away most vehemently, energetically whisking his little tail with every squeaking cry he uttered. Prairie dogs are not fastidious in their choice of companions; various long, checkered snakes were sunning themselves in the midst of the village, and demure little gray owls, with a large white ring around each eye, were perched side by side with the rightful inhabitants. The prairie teemed with life. Again and again I looked toward the crowded hillsides, and was sure I saw horsemen; and riding near, with a mixture of hope and dread, for Indians were abroad, I found them transformed into a group of buffalo. There was nothing in human shape amid all this vast congregation of brute forms.

When I turned down the buffalo path the prairie seemed changed; only a wolf or two glided past at intervals, like conscious felons, never looking to the right or left. Being now free from anxiety I was at leisure to observe minutely the objects around me; and here, for the first time, I noticed insects wholly different from any of the varieties found farther to the eastward. Gaudy butterflies fluttered about my horse's head; strangely formed beetles, glittering with metallic luster, were crawling upon plants that I had never seen before; multitudes of lizards, too, were darting like lightning over the sand.

I had run to a great distance from the river. It cost me a long ride on the buffalo path before I saw from the ridge of a sand-hill the pale surface of the Platte glistening in the midst of its desert valleys, and the faint outline of the hills beyond waving along the sky. From where I stood not a tree nor a bush nor a living thing was visible throughout the

whole extent of the sun-scorched landscape. In half an hour I came upon the trail, not far from the river; and seeing that the party had not yet passed, I turned eastward to meet them, old Pontiac's long, swinging trot again assuring me that I was right in doing so. Having been slightly ill on leaving camp in the morning, six or seven hours of rough riding had fatigued me extremely. I soon stopped, therefore, flung my saddle on the ground, and with my head resting on it, and my horse's trail-rope tied loosely to my arm, lay waiting the arrival of the party, speculating meanwhile on the extent of the injuries Pontiac had received. At length the white wagon-coverings rose from the verge of the plain. By a singular coincidence, almost at the same moment two horsemen appeared coming down from the hills. They were Shaw and Henry, who had searched for me awhile in the morning, but well knowing the futility of the attempt in such a broken country, had placed themselves on the top of the highest hill they could find, and picketing their horses near them, as a signal to me, had lain down and fallen asleep. The stray cattle had been recovered, as the emigrants told us, about noon. Before sunset we pushed forward eight miles farther.

"JUNE 7, 1846.—Four men are missing; R., Sorel, and two emigrants. They set out this morning after buffalo, and have not yet made their appearance; whether killed or lost, we cannot tell."

I find the above in my note-book, and well remember the council held on the occasion. Our fire was the scene of it; for the palpable superiority of Henry Chatillon's experience and skill made him the resort of the whole camp upon every question of difficulty. He was molding bullets at the fire when the captain drew near, with a perturbed and careworn expression of countenance, faithfully reflected on the heavy features of Jack, who followed close behind. Then emigrants came straggling from their wagons toward the common center; various suggestions were made to account for the absence of the four men, and one or two of the emigrants

declared that when out after the cattle they had seen Indians dogging them, and crawling like wolves along the ridges of the hills. At this the captain slowly shook his head with double gravity, and solemnly remarked:

"It's a serious thing to be traveling through this cursed wilderness"; an opinion in which Jack immediately expressed a thorough coincidence. Henry would not commit himself by declaring any positive opinion:

"Maybe he only follow the buffalo too far; maybe Indian kill him; maybe he got lost; I cannot tell!"

With this the auditors were obliged to rest content; the emigrants, not in the least alarmed, though curious to know what had become of their comrades, walked back to their wagons, and the captain betook himself pensively to his tent. Shaw and I followed his example.

AMERICA

IN THE ROCKY MOUNTAINS

By JOHN C. FRÉMONT

LEAVING camp about 11 o'clock, on August 25, we traveled a short distance down the river, and halted to noon on the bank, at a point where the road quits the valley of Bear River, and, crossing a ridge which divides the Great Basin from the Pacific waters, reaches Fort Hall, by way of the Portneuf River, in a distance of probably fifty miles, or two and a half days' journey for wagons. An examination of the great lake which is the outlet of the river, and the principal feature of geographical interest in the basin, was one of the main objects contemplated in the general plan of our survey, and I accordingly determined at this place to leave the road, and, after having completed a reconnaissance of the lake, regain it subsequently at Fort Hall. But our little stock of provisions had again become extremely low; we had only dried meat sufficient for one meal, and our supply of flour and other comforts was entirely exhausted. I therefore immediately dispatched one of the party, Henry Lee, with a note to Carson, at Fort Hall, directing him to load a pack-horse with whatever could be obtained there in the way of provisions, and endeavor to overtake me on the river. In the meantime we had picked up along the road two tolerably well-grown calves, which would have become food for wolves, and which had probably been left by some of the earlier emigrants, none of those we had met having made any claim to them; and on these I mainly relied for support during our circuit to the lake.

In sweeping around the point of the mountain which runs

MOUNT CORCORAN

down into the bend, the river here passes between perpendicular walls of basalt, which always fix the attention, from the regular form in which it occurs, and its perfect distinctness from the surrounding rocks among which it has been placed. The mountain, which is rugged and steep, and, by our measurement, 1400 feet above the river directly opposite the place of our halt, is called the Sheep Rock—probably because a flock of the common mountain sheep (*Ovis montana*) had been seen on the craggy point.

As we were about resuming our march in the afternoon I was attracted by the singular appearance of an isolated hill with a concave summit, in the plain, about two miles from the river, and turned off toward it, while the camp proceeded on its way to the southward in search of the lake. I found the thin and stony soil of the plain entirely underlaid by the basalt which forms the river walls; and when I reached the neighborhood of the hill the surface of the plain was rent into frequent fissures and chasms of the same scoriated volcanic rock, from forty to sixty feet deep, but which there was not sufficient light to penetrate entirely, and which I had not time to descend. Arrived at the summit of the hill I found that it terminated in a very perfect crater, of an oval, or nearly circular form, three hundred and sixty paces in circumference, and sixty feet at the greatest depth. The walls, which were perfectly vertical, and disposed like masonry in a very regular manner, were composed of a brown-colored scoriaceous lava, evidently the production of a modern volcano, and having all the appearance of the lighter scoriaceous lavas of Mount Ætna, Vesuvius, and other volcanoes. The faces of the walls were reddened and glazed by the fire in which they had been melted, and which had left them contorted and twisted by its violent action.

Our route during the afternoon was a little rough, being (in the direction we had taken) over a volcanic plain, where our progress was sometimes obstructed by fissures, and black beds composed of fragments of the rock. On both sides the mountains appeared very broken, but tolerably well timbered.

August 26.—Crossing a point of ridge which makes into

the river, we fell upon it again before sunset, and encamped on the right bank opposite to the encampment of three lodges of Snake Indians. They visited us during the evening and we obtained from them a small quantity of roots of different kinds in exchange for goods. Among them was a sweet root of very pleasant flavor having somewhat the taste of preserved quince. My endeavors to become acquainted with the plants which furnished to the Indians a portion of their support were only gradually successful, and after long and persevering attention; and even after obtaining I did not succeed in preserving them until they could be satisfactorily determined. In this portion of the journey I found this particular root cut up into such small pieces that it was only to be identified by its taste, when the bulb was met with in perfect form among the Indians lower down on the Columbia, among whom it is the highly celebrated kamas. It was long afterward, on our return through Upper California, that I found the plant itself in bloom, which I supposed to furnish the kamas root (*Camassia esculenta*). The root diet had a rather mournful effect at the commencement, and one of the calves was killed this evening for food. The animals fared well on rushes.

August 27.—The morning was cloudy, with appearance of rain, and the thermometer at sunrise at 29°. Making an unusually early start we crossed the river at a good ford: and following for about three hours a trail which led along the bottom we entered a labyrinth of hills below the main ridge, and halted to noon in the ravine of a pretty little stream timbered with cotton-wood of a large size, ash-leaved maple, with cherry and other shrubby trees. The hazy weather which had prevented any very extended views since entering the Green River Valley, began now to disappear. There was a slight rain in the earlier part of the day and at noon, when the thermometer had risen to 79.5°, we had a bright sun, with blue sky and scattered cumuli. According to the barometer our halt here among the hills was at an elevation of 5320 feet. Crossing a dividing ridge in the afternoon we followed down another little Bear River tributary to the point where it emerged on an open green flat among the hills, tim-

bered with groves, and bordered with cane thickets, but without water. A pretty little rivulet, coming out of the hillside, and overhung by tall, flowering plants of a species I had not hitherto seen, furnished us with a good camping-place. The evening was cloudy, the temperature at sunset 69°, and the elevation 5140 feet. Among the plants occurring along the line of road during the day *epinettes des prairies* (*Grindelia squarrosa*) was in considerable abundance, and is among the very few plants remaining in bloom—the whole country having now an autumnal appearance, in the crisped and yellow plants, and dried-up grasses. Many cranes were seen during the day, with a few antelopes, very shy and wild.

August 28.—During the night we had a thunder-storm, with moderate rain, which has made the air this morning very clear, the thermometer being at 55°. Leaving our encampment at the Cane spring, and quitting the trail on which we had been traveling, and which would probably have afforded us a good road to the lake, we crossed some very deep ravines, and, in about an hour's traveling, again reached the river. We were now in a valley five or six miles wide, between mountain ranges, which, about thirty miles below, appeared to close up and terminate the valley, leaving for the river only a very narrow pass, or cañon, behind which we imagined that we should find the broad waters of the lake. We made the usual halt at the mouth of a small, clear stream, having a slightly mineral taste (perhaps of salt), 4760 feet above the Gulf. In the afternoon we climbed a very steep sandy hill; and, after a slow and winding day's march of twenty-seven miles, encamped at a slough on the river. There were great quantities of geese and ducks, of which only a few were shot; the Indians having probably made them very wild. The men employed themselves in fishing, but caught nothing. A skunk (*Mephitis americana*), which was killed in the afternoon, made a supper for one of the messes. The river is bordered occasionally with fields of cane, which were regarded as an indication of our approach to a lake country. We had frequent showers of rain during the night, with thunder.

August 29.—The thermometer at sunrise was 54°, with air from the N. W., and dark rainy clouds moving on the horizon; rain squalls and bright sunshine by intervals. I rode ahead with Basil to explore the country, and, continuing about three miles along the river, turned directly off on a trail running toward three marked gaps in the bordering range, where the mountains appeared cut through to their bases, toward which the river plain rose gradually. Putting our horses into a gallop on some fresh tracks which showed very plainly in the wet path, we came suddenly upon a small party of Shoshone Indians, who had fallen into the trail from the north. We could only communicate by signs; but they made us understand that the road through the chain was a very excellent one leading into a broad valley which ran to the southward. We halted to noon at what may be called the gate of the pass; on either side of which were huge mountains of rock, between which stole a little pure water-stream, with a margin just sufficiently large for our passage. From the river the plain had gradually risen to an altitude of 5500 feet, and, by meridian observation, the latitude of the entrance was 42°.

In the interval of our usual halt several of us wandered along up the stream to examine the pass more at leisure. Within the gate the rocks receded a little back, leaving a very narrow, but most beautiful valley, through which the little stream wound its way, hidden by different kinds of trees and shrubs—aspen, maple, willow, cherry, and elder; a fine verdure of smooth short grass spread over the remaining space to the bare sides of the rocky walls. These were of a blue limestone, which constitutes the mountain here; and opening directly on the grassy bottom were several curious caves, which appeared to be inhabited by root-diggers. On one side was gathered a heap of leaves for a bed, and they were dry, open, and pleasant. On the roofs of the caves I remarked bituminous exudations from the rock. . . .

The most remarkable feature of the pass is the Standing Rock, which has fallen from the cliffs above, and standing perpendicularly near the middle of the valley, presents itself

like a watch-tower in the pass. It will give you a tolerably correct idea of the character of the scenery in this country, where generally the mountains rise abruptly up from comparatively unbroken plains and level valleys; but it will entirely fail in representing the picturesque beauty of this delightful place, where a green valley, full of foliage, and a hundred yards wide, contrasts with naked crags that spire up into a blue line of pinnacles 3000 feet above, sometimes crested with cedar and pine, and sometimes ragged and bare.

The detention we met with in opening the road, and perhaps a willingness to linger on the way, made the afternoon's travel short, and about two miles from the entrance we passed through another gate, and encamped on the stream at the junction of a little fork from the southward, around which the mountains stooped more gently down, forming a small open cove.

As it was still early in the afternoon, Basil and myself in one direction, and Mr. Preuss in another, set out to explore the country, and ascended different neighboring peaks, in the hope of seeing some indications of the lake; but though our elevation afforded magnificent views, the eye ranging over a long extent of Bear River, with the broad and fertile Cache valley in the direction of our search, was only to be seen a bed of apparently impracticable mountains. Among these the trail we had been following turned sharply to the northward, and it began to be doubtful if it would not lead us away from the object of our destination; but I nevertheless determined to keep it, in the belief that it would eventually bring us right. A squall of rain drove us out of the mountain, and it was late when we reached the camp. The evening closed in with frequent showers of rain, with some lightning and thunder.

August 30.—We had constant thunder-storms during the night, but in the morning the clouds were sinking to the horizon, and the air was clear and cold, with the thermometer at sunrise at 39°. Elevation by barometer 5580 feet. We were in motion early, continuing up the little stream without encountering any ascent where a horse would not easily gallop, and, crossing a slight dividing ground at the summit, descended

upon a small stream, along which we continued on the same excellent road. In riding through the pass numerous cranes were seen; and prairie hens, or grouse (*Bonas umbellus*), which lately had been rare, were very abundant.

This little affluent brought us to a larger stream, down which we traveled through a more open bottom, on a level road, where heavily laden wagons could pass without obstacle. The hills on the right grew lower, and, on entering a more open country, we discovered a Shoshone village; and being desirous to obtain information, and purchase from them some roots and berries, we halted on the river, which was lightly wooded with cherry, willow, maple, service berry, and aspen. The barometer indicated a height of 5170 feet. A number of Indians came immediately over to visit us, and several men were sent to the village with goods, tobacco, knives, cloth, vermilion, and the usual trinkets, to exchange for provisions. Several of the Indians drew aside their blankets, showing me their lean and bony figures; and I would not any longer tempt them with a display of our merchandise to part with their wretched subsistence, when they gave as a reason that it would expose them to temporary starvation. A great portion of the region inhabited by this nation formerly abounded in game; the buffalo ranging about in herds, as we had found them on the eastern waters, and the plains dotted with scattered bands of antelope; but so rapidly have they disappeared within a few years that now, as we journeyed along, an occasional buffalo skull and a few wild antelope were all that remained of the abundance which had covered the country with animal life.

AMERICA

AN ANCIENT MEXICAN PALACE

By DÉSIRÉ CHARNAY

WE cleared away rubbish until we reached the floor, following the walls, corners, and openings of the various apartments, as we had done at Tula; and when, three days later, the engineer joined us, ten rooms, forming part of the house, had been unearthed. He was so surprised at our success that, stopping short, he exclaimed: "Why, it is our Tula palace over again!"

And so it was—inner court, apartments on different levels, everything as we had found before, save that here the rooms were much larger and most supported by pillars; one of these chambers measured forty-nine feet on one side, that is, seven hundred and thirty-two feet in circumference. The walls, nearly six feet seven inches thick, are built of stone and mortar, incrusted with deep cement, sloping up about three feet and terminating perpendicularly. The center of the room is occupied by six pillars, on which rose stone, brick, or wood columns bearing the roof.

This is undoubtedly a palace, and these are the reception-rooms; the sleeping apartments were behind; unfortunately they lie under cultivated ground covered with Indian corn, so we are not permitted to disturb them. In the large room we observed small stone rings fixed to the wall, and on each side of the entrance, also fixed to the wall, two small painted slabs. What had been their use? To support lights at night? But how was that possible? For even now the only lights the natives use are ocotes, pieces of resinous wood, whilst the

slabs bear no traces of smoke. I had, it is true, met in the course of my excavations with terra-cotta objects which might have been taken for candlesticks, but to which I had attached no importance, when I suddenly remembered a passage in Sahagun bearing on the subject: "The chandler who knows how to do his work first bleaches, cleans, and melts the wax, and when in a liquid state he pours it on a wick and rolls it between two slabs; he sometimes puts a layer of black wax within a white layer," etc. My first supposition had been right.

Here also the floors and walls are coated with mortar, stucco, or cement, save that in the dwellings of the rich, necessarily few, they are ornamented with figures, as principal subject, with a border like an Aubusson carpet. The colors are not all effaced, red, black, blue, yellow, and white, are still discernible; a few examples of these frescoes are to be seen in the Trocadéro. I am convinced that numerous treasures might be brought to light were regular excavations to be made, but the Mexican Government, which would have most interest in such a work, does not seem to care to undertake it.

Leaving my men under the direction of Colonel Castro, I return to the "Path of Death," composed of a great number of small mounds, Tlateles, the tombs of great men. They are arranged symmetrically in avenues terminating at the sides of the great pyramids, on a plain of some six hundred and twenty feet to nine hundred and seventy-five feet in length; fronting them are cemented steps, which must have been used as seats by the spectators during funeral ceremonies or public festivities. On the left, amidst a mass of ruins, are broken pillars, said to have belonged to a temple; the huge capitals have some traces of sculpture. Next comes a quadrangular block, of which a cast is to be found in the main gallery of the Trocadéro.

In the course of my excavations I had found now and again numerous pieces of worked obsidian, precious stones, beads, etc., within the circuit of ants' nests, which these busy insects had extracted from the ground in digging their gal-

leries; and now on the summit of the lesser pyramid I again came upon my friends, and among the things I picked out of their nests was a perfect earring of obsidian, very small, and as thin as a sheet of paper. It is not so curious as it seems at first, for we are disturbing a ground formed by fifty generations.

Glass does not seem to have been known to the Indians, for although Tezcatlipoca was often figured with a pair of spectacles, they may only have been figurative ones like those of the manuscripts, terra-cotta, or *bassi-relievi,* for there is nothing to show that they had any idea of optics.

I now went back to my men, when to my great delight I found they had unearthed two large slabs showing the entrance of two sepulchres; they were the first I had yet found, and considering them very important, I immediately telegraphed to Messrs. Chavero and Berra, both of whom are particularly interested in American archæology. I expected to see them come by the very next train, to view not only the tombstones, but also the palace, which attracted a great many visitors; but to my surprise one sent word that he had a headache, whilst the other pleaded a less poetic ailment.

One of the slabs closed a vault, and the other a cave with perpendicular walls; we went down the former by a flight of steps, in fairly good condition, yet it was a long and rather dangerous affair, for we were first obliged to demolish a wall facing us, in which we found a skull, before we could get to the room which contained the tombs.

The vases within them are exactly like those we found in the plaza, except that one is filled with a fatty substance—like burnt flesh—mixed with some kind of stuff, the woof of which is still discernible, besides beads of serpentine, bones of dogs and squirrels, knives of obsidian, twisted by the action of fire. We know from Sahagun that the dead were buried with their clothes and their dogs to guide and defend them in their long journey: "When the dead were ushered into the presence of the king of the nether world, Mictlanteculti, they offered him papers, bundles of sticks, pine-wood and perfumed reeds, together with loosely twisted threads of

white and red cotton, a manta, a maxtli, tunics, and shirts. When a woman died her whole wardrobe was carefully put aside, and a portion burnt eighty days after; this operation was repeated on that day twelve months for four years, when everything that had belonged to the deceased was finally consumed. The dead then came out of the first circle to go successively through nine others encompassed by a large river. On its banks were a number of dogs which helped their owners to cross the river; whenever a ghost neared the bank, his dog immediately jumped into the river and swam by his side or carried him to the opposite bank." It was on this account that Indians had always several small dogs about them.

The speech which was addressed to the dead when laid out previous to being buried, is so remarkable as to make one suspect that the author unconsciously added something of his own: "Son, your earthly hardships and sufferings are over. We are but mortal, and it has pleased the Lord to call you to himself. We had the privilege of being intimately acquainted with you; but now you share the abode of the gods, whither we shall all follow, for such is the destiny of man. The place is large enough to receive every one; but although all are bound for the gloomy bourn, none ever return." Then followed the speech addressed to the nearest kinsman of the dead: "O son, cheer up; eat, drink, and let not your mind be cast down. Against the divine fiat who can contend? This is not of man's doing; it is the Lord's. Take comfort to bear up against the evils of daily life; for who is able to add a day, an hour, to his existence? Cheer up, therefore, as becomes a man."

But to return to our tombstones. They are both alike, being about five feet high, three feet five inches broad, and six inches and a half thick. The upper side is smooth, the lower has some carving in the shape of a cross, four big tears or drops of water, and a pointed tongue in the center, which, starting from the bottom of the slab, runs up in a line parallel to the drops.

Knowing how general was the worship of Tlaloc among

the Indians, I conjectured this had been a monument to the god of rain, to render him propitious to the dead; a view shared and enlarged upon by Dr. Hamy in a paper read before the Académie des Sciences in November, 1882; and that I should be in accord with the eminent specialist on American antiquities is a circumstance to make me proud. I may add that the carving of this slab is similar to that of the cross on the famous *basso-relievo* at Palenque; so that the probability of the two monuments having been erected to the god of rain is much strengthened thereby.

As our slabs are far more archaic than those at Palenque, we think we are justified in calling them earlier in time—the parent samples of the later ones. Nor is our assumption unsupported, for we shall subsequently find that the cult of Tlaloc and Quetzalcoatl was carried by the Toltecs in their distant peregrinations. These slabs, therefore, and the pillars which were found in the village, acquire a paramount importance in establishing the affiliation of Toltec settlements in Tabasco, Yucatan, and other places, furnishing us with further data in regard to certain monuments at Palenque, the steles of Tikal, and the massive monolith idols of Copan.

I next attacked the terraced court fronting the palace toward the Path of Death, and the amount of constructions and substructures we came upon is almost beyond belief: inclined stuccoed walls crossing each other in all directions, flights of steps leading to terraces within the pyramid, ornaments, pottery, and detritus; so much so that the pyramid might not improperly be called a necropolis, in which the living had their dwellings.

In a word, our campaign at Teotihuacan was as successful as our campaign at Tula. We were attended by the same good fortune, and the reader whom such things may interest will find a bas-relief of both Toltec palaces, and of one of the tombstones, in the Trocadéro.

From what has been said it will be seen that the monuments at Teotihuacan were partly standing at the time of the Conquest.

Life and Scenery in Venezuela

By ALEXANDER VON HUMBOLDT

WE returned to the valley of Aragua and stopped at the farm of Barbula. We had heard of a tree called the cow-tree, the sap of which is a nourishing milk, and here we found one.

When incisions are made in the trunk of this tree, it yields abundance of a glutinous milk, tolerably thick, devoid of all acridity, and of an agreeable and balmy smell. It was offered to us in the shell of a calabash. We drank considerable quantities of it in the evening before we went to bed, and very early in the morning, without feeling the least injurious effect. The glutinous character of this milk alone renders it a little disagreeable. The negroes and the free people who work in the plantations drink it, dipping into it their bread of maize or cassava. The overseer of the farm told us that the negroes grow sensibly fatter during the season when the *palo de vaca* furnishes them with most milk. The juice, exposed to the air, presents at its surface membranes of a strongly animalized substance, yellowish, stringy, and resembling cheese.

Amidst the great number of curious phenomena which I have observed in the course of my travels, I confess there are few that have made so powerful an impression on me as the aspect of the cow-tree. Whatever relates to milk or to corn inspires an interest which is not merely that of the

ALEXANDER VON HUMBOLDT

physical knowledge of things, but is connected with another order of ideas and sentiments. We can scarcely conceive how the human race could exist without farinaceous substances, and without that nourishing juice which the breast of the mother contains, and which is appropriated to the long feebleness of the infant. The amylaceous matter of corn, the object of religious veneration among so many nations, ancient and modern, is diffused in the seeds and deposited in the roots of vegetables; milk, which serves as an aliment, appears to us exclusively the produce of animal organization. Such are the impressions we have received in our earliest infancy; such is also the source of that astonishment created by the aspect of the tree just described. It is not here the solemn shades of forests, the majestic course of rivers, the mountains wrapped in eternal snow, that excite our emotion. A few drops of vegetable juice recall to our minds all the powerfulness and the fecundity of nature. On the barren flank of a rock grows a tree with coriaceous and dry leaves. Its large woody roots can scarcely penetrate into the stone. For several months of the year not a single shower moistens its foliage. Its branches appear dead and dried; but when the trunk is pierced there flows from it a sweet and nourishing milk. It is at the rising of the sun that this vegetable fountain is most abundant. The negroes and natives are then seen hastening from all quarters, furnished with large bowls to receive the milk, which grows yellow and thickens at its surface. Some empty their bowls under the tree itself, others carry the juice home to their children. . . .

The sun was almost at its zenith; the earth, wherever it appeared sterile and destitute of vegetation, was at the temperature of 120°. Not a breath of air was felt at the height at which we were on our mules; yet, in the midst of this apparent calm, whirls of dust incessantly arose, driven on by those small currents of air which glide only over the surface of the ground, and are occasioned by the difference of temperature between the naked sand and the spots covered with grass. All around us the plains seemed to ascend

to the sky, and the vast and profound solitude appeared like an ocean covered with sea-weed. On the horizon the earth was confounded with the sky. Through the dry mist and strata of vapor the trunks of palm-trees were seen from afar, stripped of their foliage and their verdant summits, and looking like the masts of a ship descried upon the horizon. There is something awful, as well as sad and gloomy, in the uniform aspect of these steppes. Everything seems motionless; scarcely does a small cloud, passing across the zenith, and denoting the approach of the rainy season, cast its shadow on the earth. I know not whether the first aspect of the llanos excites less astonishment than that of the chain of the Andes.

When, beneath the vertical rays of the bright and cloudless sun of the tropics, the parched sward crumbles into dust, then the indurated soil cracks and bursts as if rent asunder by some mighty earthquake. And if, at such a time, two opposite currents of air, by conflict moving in rapid gyrations, come in contact with the earth, a singular spectacle presents itself. Like funnel-shaped clouds, their apexes touching the earth, the sand rises in vapory form through the rarefied air in the electrically-charged center of the whirling current, sweeping on like the rushing water-spout, which strikes such terror into the heart of the mariner. A dim and sallow light gleams from the lowering sky over the dreary plain. The horizon suddenly contracts, and the heart of the traveler sinks with dismay as the wide steppe seems to close upon him on all sides. The hot and dusty earth forms a cloudy vail which shrouds the heavens from view, and increases the stifling oppression of the atmosphere, while the east wind, when it blows over the long-heated soil, instead of cooling, adds to the burning glow. Gradually, too, the pools of water which had been protected from evaporation by the now seared foliage of the fan-palm, disappear. As in the icy north animals became torpid from cold, so here the crocodile and the boa-constrictor lie wrapped in unbroken sleep, deeply buried in the dried soil. Everywhere the drought announces death, yet everywhere

the thirsty wanderer is deluded by the phantom of a moving, undulating, watery surface, created by the deceptive play of the mirage. A narrow stratum separates the ground from the distant palm-trees, which seem to hover aloft, owing to the contact of currents of air having different degrees of heat, and therefore of density. Shrouded in dark clouds of dust, and tortured by hunger and burning thirst, oxen and horses scour the plain, the one bellowing dismally, the other with outstretched necks snuffing the wind, in the endeavor to detect, by the moisture of the air, the vicinity of some pool of water not yet wholly evaporated.

The mule, more cautious and cunning, adopts another method of allaying his thirst. There is a globular and articulated plant, the *Melocactus*, which encloses under its prickly integument an aqueous pulp. After carefully striking away the prickles with its forefeet, the mule cautiously ventures to apply his lips to imbibe the cooling thistle juice. But the draught from this living vegetable spring is not always unattended by danger, and these animals are often observed to have been lamed by the puncture of the cactus thorn. Even if the burning heat of day be suceeded by the cool freshness of the night, here always of equal length, the wearied ox and horse enjoy no repose. Huge bats now attack the animals during sleep, and vampire-like suck their blood; or, fastening on their backs, raise festering wounds, in which mosquitoes, hippobosces, and a host of other stinging insects burrow and nestle.

When, after a long drought, the genial season of rain arrives, the scene suddenly changes. The deep azure of the hitherto cloudless sky assumes a lighter hue. Scarcely can the dark space in the constellation of the Southern Cross be distinguished at night. The mild phosphorescence of the Magellenic clouds fades away. Like some distant mountain, a single cloud is seen rising perpendicularly on the southern horizon. Misty vapors collect and gradually overspread the heavens, while distant thunder proclaims the approach of the vivifying rain. Scarcely is the surface of the earth moistened before the teeming steppe becomes covered

with a variety of grasses. Excited by the power of light, the herbaceous mimosa unfolds its dormant, drooping leaves, hailing, as it were, the rising sun in chorus with the matin song of the birds and the opening flowers of aquatic plants. Horses and oxen, buoyant with life and enjoyment, roam over and crop the plains. The luxuriant grass hides the beautifully spotted jaguar, who, lurking in safe concealment, and carefully measuring the extent of his leap, darts, like the Asiatic tiger, with a cat-like bound upon his passing prey. At times, according to the accounts of the natives, the humid clay on the banks of the morasses is seen to rise slowly in broad flakes. Accompanied with a violent noise, as on the eruption of a small mud-volcano, the upheaved earth is hurled high into the air. Those who are familiar with the phenomenon fly from it; for a colossal water-snake, or a mailed and scaly crocodile, awakened from its trance by the first fall of rain, is about to burst from its tomb.

When the rivers bounding the plain to the south, as the Arauca, the Apure, and the Payara, gradually overflow their banks, nature compels those creatures to live as amphibious animals, which, during the first half of the year, were perishing with thirst on the waterless and dusty plain. A part of the steppe now presents the appearance of a vast inland sea. The mares retreat with their foals to the higher banks, which project, like islands, above the spreading waters. Day by day the dry surface diminishes in extent. The cattle, crowded together, and deprived of pasturage, swim for hours about the inundated plain, seeking a scanty nourishment from the flowing panicles of the grasses which rise above the lurid and bubbling waters. Many foals are drowned, many are seized by crocodiles, crushed by their serrated tails, and devoured. Horses and oxen may not unfrequently be seen which have escaped from the fury of this bloodthirsty and gigantic lizard, bearing on their legs the marks of its pointed teeth. . . .

Below the mission of Santa Barbara de Arichuna we passed the night as usual in the open air, on a sandy flat, on the bank of the Apure, skirted by the impenetrable forest.

We had some difficulty in finding dry wood to kindle the fires with which it is here customary to surround the bivouac, as a safeguard against the attacks of the jaguar. The air was bland and soft and the moon shone brightly. Several crocodiles approached the bank; and I have observed that fire attracts these creatures as it does our crabs and many other aquatic animals. The oars of our boats were fixed upright in the ground, to support our hammocks. Deep stillness prevailed, only broken at intervals by the blowing of the fresh-water dolphins, which are peculiar to the river network of the Orinoco.

After eleven o'clock such a noise began in the contiguous forest, that for the remainder of the night all sleep was impossible. The wild cries of animals rang through the woods. Among the many voices which resounded together, the Indians could only recognize those which, after short pauses, were heard singly. There was the monotonous, plaintive cry of the howling monkeys, the whining, flute-like notes of the small sapajous, the grunting murmur of the striped nocturnal ape, the fitful roar of the great tiger, the cougar, or maneless American lion, the peccary, the sloth, and a host of parrots, parraquas, and other pheasant-like birds. Whenever the tigers approached the edge of the forest, our dog, who before had barked incessantly, came howling to seek protection under the hammocks. Sometimes the cry of the tiger resounded from the branches of a tree, and was always then accompanied by the plaintive, piping tones of the apes, who were endeavoring to escape from the unwonted pursuit.

If one asks the Indians why such a continuous noise is heard on certain nights, they answer, with a smile, that "the animals are rejoicing in the beautiful moonlight, and celebrating the return of the full moon." To me the scene appeared rather to be owing to an accidental, long-continued, and gradually increasing conflict among the animals. Thus, for instance, the jaguar will pursue the peccaries and the tapirs, which, densely crowded together, burst through the barrier of tree-like shrubs which opposes their flight. Ter-

rified at the confusion, the monkeys on the tops of the trees join their cries with those of the larger animals. This arouses the tribes of birds who built their nests in communities, and suddenly the whole animal world is in a state of commotion. Further experience taught us that it was by no means always the festival of moonlight that disturbed the stillness of the forest; for we observed that the voices were loudest during violent storms of rain, or when the thunder echoed and the lightning flashed through the depths of the wood. The good-natured Franciscan monk who accompanied us through the cataracts of Apures and Maypures to San Carlos, on the Rio Negro, and to the Brazilian frontier, used to say, when apprehensive of a storm at night, "May Heaven grant a quiet night both to us and to the wild beasts of the forest!" . . .

The new canoe intended for us was, like all Indian boats, a trunk of a tree hollowed out partly by the hatchet and partly by fire. It was forty feet long and three broad. Three persons could not sit in it side by side. These canoes are so crank, and they require, from their instability, a cargo so equally distributed, that when you want to rise for an instant you must warn the rowers to lean to the opposite side. Without this precaution the water would necessarily enter the side pressed down. It is difficult to form an idea of the inconveniences that are suffered in such wretched vessels. To gain something in breadth, a sort of lattice-work had been constructed on the stern with branches of trees that extended on each side beyond the gunwale. Unfortunately, the *toldo*, or roof of leaves, that covered this lattice-work, was so low that we were obliged to lie down, without seeing anything, or, if seated, to sit nearly double. The necessity of carrying the canoe across the rapids, and even from one river to another, and the fear of giving too much hold to the wind, by making the toldo higher, render this construction necessary for vessels that go up toward the Rio Negro. The toldo was intended to cover four persons, lying on the deck or lattice-work of brush-wood; but our legs reached far beyond it, and when it rained half our bodies

were wet. Our couches consisted of ox-hides or tiger-skins spread upon branches of trees, which were painfully felt through so thin a covering. The fore part of the boat was filled with Indian rowers, furnished with paddles, three feet long, in the form of spoons. They were all naked, seated two by two, and they kept time in rowing with a surprising uniformity, singing songs of a sad and monotonous character. The small cages containing our birds and our monkeys—the number of which augmented as we advanced—were hung some to the toldo and others to the bow of the boat. This was our traveling menagerie. Every night, when we established our watch, our collection of animals and our instruments occupied the center; around these were placed, first, our hammocks, then the hammocks of the Indians; and on the outside were the fires, which are thought indispensable against the attacks of the jaguar. About sunrise the monkeys in our cages answered the cries of the monkeys of the forest.

In a canoe not three feet wide, and so encumbered, there remained no other place for the dried plants, trunks, sextant, a dipping needle, and the meteorological instruments, than the space below the lattice-work of branches, on which we were compelled to remain stretched the greater part of the day. If we wished to take the least object out of a trunk, or to use an instrument, it was necessary to row ashore and land. To these inconveniences were joined the torment of the mosquitoes which swarmed under the toldo, and the heat radiated from the leaves of the palm-trees, the upper surface of which was continually exposed to the solar rays. We attempted every instant, but always without success, to amend our situation. While one of us hid himself under a sheet to ward off the insects, the other insisted on having green wood lighted beneath the toldo, in the hope of driving away the mosquitoes by the smoke. The painful sensations of the eyes, and the increase of heat, already stifling, rendered both these contrivances alike impracticable. With some gayety of temper, with feelings of mutual good-will, and with a vivid taste for the majestic grandeur

of these vast valleys of rivers, travelers easily support evils that become habitual. . . .

The lower strata of air, from the surface of the ground to the height of fifteen or twenty feet, are absolutely filled with venomous insects. If in an obscure spot, for instance, in the grottos of the cataracts formed by superincumbent blocks of granite, you direct your eyes towards the opening enlightened by the sun, you see clouds of mosquitoes more or less thick. I doubt whether there be a country upon earth where man is exposed to more cruel torments in the rainy season. Having passed the fifth degree of latitude you are somewhat less stung; but on the upper Orinoco the stings are more painful, because the heat and the absolute want of wind render the air more burning and more irritating in its contact with the skin. "How comfortable people must be in the moon!" said a Salive Indian to Father Gumilla. "She looks so beautiful and so clear, that she must be free from mosquitoes." These words, which denote the infancy of a people, are very remarkable. The satellite of the earth appears to all savage nations the abode of the blessed, the country of abundance. The Esquimaux, who counts among his riches a plank or the trunk of a tree, thrown by the currents on a coast destitute of vegetation, sees in the moon plains covered with forests; the Indian of the forest of Orinoco there beholds open savannas, where the inhabitants are never stung by mosquitoes.

It would be difficult for me to express the satisfaction we felt on landing at Angostura [the capital of Spanish Guiana]. The inconveniences endured at sea in small vessels are trivial in comparison with those that are suffered under a burning sky, surrounded by swarms of mosquitoes, and lying stretched in a canoe, without the possibility of taking the least bodily exercise. In seventy-five days we had performed a passage of five hundred leagues—twenty to a degree—on the five great rivers, Apure, Orinoco, Atabapo, Rio Negro, and Cassiquiare; and in this vast extent we had found but a very small number of inhabited places. Coming

from an almost desert country, we were struck with the bustle of the town, though it contained only 6000 inhabitants. We admired the conveniences which industry and commerce furnish to civilized man. Humble dwellings appeared to us magnificent; and every person with whom we conversed seemed to be endowed with superior intelligence. Long privations give a value to the smallest enjoyments; and I cannot express the pleasure we felt when we saw for the first time wheaten bread on the governor's table.

Spanish Life in Granada

By THÉOPHILE GAUTIER

WE often went to San Domingo to sit beneath the shade of the laurels, and bathe in a pool, near which, if the satirical songs are to be believed, the monks used to lead no very reputable sort of life. It is a remarkable fact that the most Catholic countries are always those in which the priests and monks are treated most cavalierly; the Spanish songs and stories about the clergy rival in license the facetiæ of Rabelais and Beroalde de Verville, and to judge by the manner in which all the ceremonies of the church are parodied in the old pieces, one would hardly think that the Inquisition ever existed.

Talking of baths, I will here relate a little incident which proves that the thermal art, carried to so high a degree of perfection by the Arabs, has lost much of its former splendor in Granada. Our guide took us to some baths that appeared very well managed, the rooms being situated round a patio shaded by a covering of vine-leaves, while a large reservoir of very limpid water occupied the greater part of the patio. So far all was well; but of what do you think the baths themselves were made? of copper, zinc, stone, or wood? Not a bit of it; you are wrong. I will tell you at once, for you will never guess; they were enormous clay jars, like those made to hold oil. These novel baths were about two-thirds buried in the ground. Before putting

ourselves in them we had the inside covered with a clean cloth, a piece of precaution which struck the attendant as something so extremely strange, and which astonished him so profoundly, that we were obliged to repeat the order several times before he would obey it. He explained this whim of ours to his own satisfaction by shrugging his shoulders and shaking his head in a commiserative manner as he pronounced in a low voice the one word: *Inglese.* There we sat, squatted down in our oil jars, with our heads stuck out at the top, like peasants *en terrine*, cutting rather grotesque figures. It was on this occasion that I understood for the first time the story of "Ali Baba and the Forty Thieves," which had always struck me as being rather difficult to believe, and had made me for an instant doubt the veracity of the "Thousand and One Nights."

There are, also, in the Albaycin, some old Moorish baths, and a pond covered over with a vaulted roof, pierced by a number of little holes in the shape of stars, but they are not in working order, and you can get nothing but cold water.

This is about all that is to be seen at Granada, during a stay of some weeks. Public amusements are scarce. The theater is closed during the summer; the bull-fights do not take place at any fixed periods; there are no clubs or establishments of this description, and the Lyceum is the only place where it is possible to see the French and other foreign papers. On certain days there is a meeting of the members, when they read papers on various subjects as well as poetry, besides singing and playing pieces, generally written by some young author of the company.

Every one employs his time, most conscientiously, in doing nothing. Gallantry, cigarettes, the manufacture of quatrains and octaves, and especially card-playing, are found sufficient to fill up a man's existence very agreeably. In Granada you see nothing of that furious restlessness, that necessity for action and change of place, which torments the people of the North. The Spanish struck me as being very philosophical. They attach hardly any importance to na-

tional life, and are totally indifferent about comfort. The thousand factitious wants, created by the civilization of northern countries, appear to them puerile and troublesome refinements. Not having to protect themselves continually against the climate, the advantages of the English home have no attractions in their eyes. What do people who would cheerfully pay for a breeze or a draught of air, if they could obtain such a thing, care whether or not the windows close properly? Favored by a beautiful sky, they have reduced human existence to its simplest expression; this sobriety and moderation in everything enables them to enjoy a large amount of liberty, a state of extreme independence; they have time enough to live, which we cannot say that we have. Spaniards cannot understand how a man can labor first in order to rest afterwards. They very much prefer pursuing an opposite course, and I think that by so doing, they show their superior sense. A workman who has earned a few reals leaves his work, throws his fine embroidered jacket over his shoulders, takes his guitar and goes and dances, or makes love to the *majas* of his acquaintance until he has not a single *cuarto* left; he then returns to his employment. An Andalusian can live splendidly for three or four sous a day; for this sum he can have the whitest bread, an enormous slice of watermelon, and a small glass of aniseed, while his lodgings cost him nothing more than the trouble of spreading his cloak upon the ground under some portico or the arch of some bridge. As a general rule, Spaniards consider work something humiliating, and unworthy of a freeman, which, in my opinion, is a natural and very reasonable idea, since Heaven, wishing to punish man for his disobedience, found no greater infliction than the obliging him to gain his daily bread by the sweat of his brow. Pleasures procured as ours are by dint of labor, fatigue, and mental anxiety and perseverance, strike Spaniards as being bought much too dearly. Like all people who lead a simple life, approaching a state of nature, they possess a correctness of judgment which makes them despise the artificial enjoyments of society. Any one coming from

Paris or London, those two whirlpools of devouring activity, of feverish and unnaturally excited energy, is greatly surprised by the mode of life of the people of Granada—a mode of life that is all leisure, filled up with conversation, siestas, promenades, music, and dancing. The stranger is astonished at the happy calmness, the tranquil dignity of the faces he sees around him. No one has that busy look which is noticeable in the persons hurrying through the streets of Paris. Every one strolls leisurely along, choosing the shady side of the street, stopping to chat with his friends, and betraying no desire to arrive at his destination in the shortest possible time. The certitude of not being able to make money extinguishes all ambition; there is no chance of a young man making a brilliant career. The most adventurous among them go to Manila or Havana, or enter the army, but on account of the piteous state of the public finances, they sometimes wait for years without hearing anything about pay. Convinced of the inutility of exertion, Spaniards do not endeavor to make fortunes, for they know that such things are quite out of the question; and they therefore pass their time in a delightful state of idleness, favored by the beauty of the country and the heat of the climate.

I saw nothing of Spanish pride; nothing is so deceptive as the reputation bestowed on individuals and nations. On the contrary, I found them exceedingly simple-minded and good-natured; Spain is the true country of equality, if not in words, at least in deeds. The poorest beggar lights his *papelito* at the *puro* of a powerful nobleman, who allows him to do so without the slightest affectation of condescension; a marchioness will step with a smile over the bodies of the ragged vagabonds who are slumbering across the threshold, and when traveling will not make a face if compelled to drink out of the same glass as the *mayoral*, the *zagul*, and the *escopetero* of the diligence. Foreigners find great difficulty in accustoming themselves to this familiarity, especially the English, who have their letters brought upon salvers, and take them with tongs. An Englishman traveling from Seville to Jeres, told his *calesero* to go and get his dinner in

the kitchen. The *calesero*, who, in his own mind, thought he was honoring a heretic very highly by sitting down at the same table with him, did not make the slightest remark, but concealed his rage as carefully as the villain in a melodrama; but about three or four leagues from Jeres, in the midst of a frightful desert, full of quagmires and bushes, he threw the Englishman very neatly out of the vehicle, shouting to him as he whipped on his horse: "My lord, you did not think me worthy of sitting at your table, and I, Don José Balbrino Bustamente y Orosco, do not think you good enough to sit on the seat in my calesin. Good evening!"

The servants, both male and female, are treated with a gentle familiarity very different from our affected civility, which seems every moment to remind them of the inferiority of their condition. A short example will prove the truth of this assertion. We had gone to a party given at the country-house of the Señora ——; in the evening there was a general desire to have a little dancing, but there were a great many more ladies than gentlemen present. To obviate this difficulty, the Señora —— sent for the gardener and another servant, who danced the whole evening without the least awkwardness, false bashfulness, or servile forwardness, but just as if they had been on a perfect equality with the rest of the company. They invited, in turn, the fairest and most noble ladies present, and the latter complied with their request in the most graceful manner possible. Our democrats are very far from having attained this practical equality, and our most determined republicans would revolt at the idea of figuring in a quadrille opposite a peasant or a footman.

Of course, there are a great many exceptions to these remarks, as there are to all other generalities. There are doubtless many Spaniards who are active, laborious, and sensible to all the refinements of life, but what I have said conveys the general impression felt by a traveler after a stay of some little time—an impression which is often more correct than that of a native observer, who is less struck by the novelty of the various circumstances.

Ascent of the Sierra Nevada

As our curiosity was satisfied with regard to Granada and its buildings, we resolved, from having had a view of the Sierra Nevada at every turn we took, to become more intimately acquainted with it, and endeavor to ascend the Mulhacen, which is the most elevated point of the range. Our friends at first attempted to dissuade us from this project, which was really attended with some little danger, but, on seeing that our resolution was fixed, they recommended us a huntsman whose name was Alexandro Romero, as a person thoroughly acquainted with the mountains, and possessing every qualification to act as guide. He came and saw us at our *casa de pupilos*, and his manly, frank physiognomy immediately prepossessed us in his favor. He wore an old velvet waistcoat, a red woolen sash, and white linen gaiters, like those of the Valencians, which enabled you to see his clean-made, nervous legs, tanned like Cordovan leather. Alpargatas of twisted rope served him for shoes, while a little Andalusian hat, which had grown red from exposure to the sun, a carbine and a powder-flask, slung across his shoulder, completed his costume. He undertook to make all the necessary preparations for our expedition, and promised to bring, at three o'clock the next morning, the four horses we required, one for my traveling companion, one for myself, a third for a young German who had joined our caravan, and a fourth for our servant, who was intrusted with the direction of the culinary department. As for Romero, he was to walk. Our provisions consisted of a ham, some roast fowls, some chocolate, bread, lemons, sugar, and a large leathern sack called a *bota*, filled with excellent Val-de-Penas, which was the principal article in the list.

At the appointed hour the horses were before our house, while Romero was hammering away at the door, with the butt-end of his carbine. Still scarcely awake, we mounted our steeds, and the procession set forth, our guide running

on beforehand to point out the road. Although it was already light, the sun had not risen, and the undulating outlines of the smaller hills which we had passed were spread out all around us, cool, limpid, and blue, like the waves of an immovable ocean. In the distance, Granada had disappeared beneath the vaporized atmosphere. When the fiery globe at last appeared on the horizon, all the hill-tops were covered with a rosy tint, like so many young girls at the sight of their lovers, and appeared to experience a feeling of bashful confusion at the idea of having been seen in their morning *déshabillé*. The ridges of the mountains are connected with the plain by gentle slopes, forming the first table-land which is easily accessible. When we reached this place, our guide decided that we should allow our horses a little breathing time, give them something to eat, and breakfast ourselves. We ensconced ourselves at the foot of a rock, near a little spring, the water of which was as bright as a diamond, and sparkled beneath the emerald-colored grass. Romero, with all the dexterity of an American savage, improvised a fire with a handful of brush-wood, while Louis prepared some chocolate, which, with the addition of a slice of ham and a draught of wine, composed our first meal in the mountains. While our breakfast was cooking, a superb viper passed beside us, and appeared surprised and dissatisfied at our installing ourselves on his estate, a fact that he gave us to understand by impolitely hissing at us, for which he was rewarded by a sturdy thrust with a sword-stick through the stomach. A little bird, that had watched the proceedings very attentively, no sooner saw the viper disabled than it flew up with the feathers of its neck standing on end, its eyes all fire, and flapping its wings, and piping in a strange state of exultation. Every time that any portion of the venomous beast writhed convulsively, the bird shrunk back, soon returning to the charge, however, and pecking the viper with its beak, after which it would rise in the air three or four feet. I do not know what the serpent could have done during its lifetime to the bird, or what was the feeling of hatred we had gratified by killing

the viper, but it is certain that I never beheld such an amount of delight.

We once again set out. From time to time we met a string of little asses coming down from the higher parts of the mountains with their load of snow, which they were carrying to Granada for the day's consumption. The drivers saluted us as they passed by, with the time-honored "Vayan Ustedes con Dios," and we replied by some joke about their merchandise, which would never accompany them as far as the city, and which they would be obliged to sell to the official who was intrusted with the duty of watering the public streets.

We were always preceded by Romero, who leaped from stone to stone with the agility of a chamois, and kept exclaiming *Bueno camino* (a good road). I should certainly very much like to know what the worthy fellow would call a bad road, for, as far as I was concerned, I could not perceive the slightest signs of any road at all. To our right and left, as far as the eye could distinguish, yawned delightful abysses very blue, very azure, and very vapory, varying in depth from 1500 to 2000 feet, a difference, however, about which we troubled ourselves very little, for a few dozen fathoms, more or less, made very little difference in the matter. I recollect, with a shudder, a certain pass, three or four pistol-shots long, and two broad—a sort of natural plank running between two gulfs. As my horse headed the procession, I had to pass first over this kind of tight-rope, which would have made the most determined acrobats pause and reflect. At certain points there was just enough width for my horse's feet, and each of my legs was dangling over a separate abyss. I sat motionless in my saddle, as upright as if I had been balancing a chair on the end of my nose. This pass, which took us a few minutes to traverse, struck me as particularly long.

When I quietly reflect on this incredible ascent, I am lost in surprise, as at the remembrance of some incoherent dream. We passed over spots where a goat would have hesitated to have set its foot, and scaled precipices so steep

that the ears of our horses touched our chins. Our road lay between rocks and blocks of stone, which threatened to fall down upon us every moment, and in zigzags along the edge of the most frightful precipices. We took advantage of every favorable opportunity, and although advancing slowly, we still advanced, gradually approaching the goal of our ambition—namely, the summit, that we had lost sight of since we had been in the mountains, because each separate piece of table-land hides the one above it.

Every time our horses stopped to take breath we turned round in our saddles to contemplate the immense panorama formed by the circular canvas of the horizon. The mountain tops which lay below us looked as if they had been marked out in a large map. The Vega of Granada, and all Andalusia, presented the appearance of an azure sea, in the midst of which a few white points that caught the rays of the sun, represented the sails of the different vessels. The neighboring eminences that were completely bare, and cracked and split from top to bottom, were tinged in the shade a greenish color, Egyptian blue, lilac, and pearl-gray, while in the sunshine they assumed a most admirable and warm hue similar to that of orange peel, tarnished gold, or a lion's skin. Nothing gives you so good an idea of a chaos, of a world still in the course of creation, as a mountain range seen from its highest point. It seems as if a nation of Titans had been endeavoring to build a sacrilegious Babel, some prodigious *Lylac* or other; that they had heaped together all the materials and commenced the gigantic terraces, when suddenly the breath of some unknown being had, like a tempest, swept over the temples and palaces they had begun, shaking their foundations and leveling them with the ground. You might fancy yourself amidst the ruins of an antediluvian Babylon, a pre-Adamite city. The enormous blocks, the Pharaoh-like masses, awaken in your breast thoughts of a race of giants that has now disappeared, so visibly is the old age of the world written in deep wrinkles on the bald front and rugged face of these millennial mountains.

We had reached the region inhabited by the eagles. Several times, at a distance, we saw one of these noble birds perched upon a solitary rock, with its eye turned toward the sun, and immersed in that state of contemplative ecstasy which with animals replaces thought. There was one of them floating at an immense height above us, and seemingly motionless in the midst of a sea of light. Romero could not resist the pleasure of sending him a visiting card in the shape of a bullet. It carried away one of the large feathers of his wing, but the eagle, nothing moved, continued on his way with indescribable majesty, as if nothing had happened. The feather whirled round and round a long time before reaching the earth; it was picked up by Romero, who stuck it in his hat.

Thin streaks of snow now began to show themselves, scattered here and there, in the shade; the air became more rarefied and the rocks more steep and precipitous; soon afterward the snow appeared in immense sheets and enormous heaps which the sun was no longer strong enough to melt. We were above the sources of the Gruil, which we perceived like a blue ribbon frosted with silver, streaming down with all possible speed in the direction of its beloved city. The table-land on which we stood is about 9000 feet above the level of the sea, and is the highest spot in the range with the exception of the peak of Veleta and the Mulhacen, which towers another thousand feet towards the immeasurable height of heaven. On this spot Romero decided that we should pass the night. The horses, who were worn out with fatigue, were unsaddled; Louis and the guide tore up a quantity of brushwood, roots, and juniper plants to make a fire, for although in the plain the thermometer stood at thirty or thirty-five degrees, there was a freshness on the heights we then occupied, which we knew would settle down into intense cold as soon as the sun had set. It was about five o'clock in the afternoon; my companion and the young German determined to take advantage of the daylight that remained, to scale alone and on foot the last heights of the mountain. For my own part, I preferred stopping behind;

my soul was moved by the grand and sublime spectacle before me, and I busied myself with scribbling in my pocket-book sundry verses, which, if not well turned, had at least the merit of being the only alexandrines composed at such an elevation. After my strophes were finished, I manufactured some sorbets with snow, sugar, lemon and brandy, for our dessert. Our encampment presented rather a picturesque appearance; our saddles served us for seats, and our cloaks for a carpet, while a large heap of snow protected us from the wind. A fire of broom blazed brightly in the center, and we fed it by throwing in, from time to time, a fresh branch which shriveled up and hissed, darting out its sap in little streams of all colors. Above us the horses stretched forward their thin heads, with their sad, gentle eyes, and caught an occasional puff of warmth.

Night was rapidly approaching. The least elevated mountains were the first to sink into obscurity, and the light, like a fisherman flying before the rising tide, leaped from peak to peak, retiring to the highest in order to escape from the shade which was advancing from the valleys beneath and burying everything in its bluish waves. The last ray which stopped on the summit of the Mulhacen hesitated for an instant, then spreading out its golden wings, winged its way like some birds of flame into the depths of heaven and disappeared. The obscurity was now complete, and the increased brilliancy of our fire caused a number of grotesque shadows to dance out upon the sides of the rocks. Eugene and the German had not returned, and I began to grow anxious on their account; I feared that they might have fallen down some precipice, or been buried beneath some mass of snow. Romero and Louis already requested me to sign a declaration to the effect that they had neither murdered nor robbed the two worthy gentlemen, and that, if the latter were dead, it was their own fault.

Meanwhile, we tore our lungs to pieces by indulging in the most shrill and savage cries, to let them know the position of our wigwam in case they should not be able to perceive the fire. At last the report of fire-arms, which was

hurled back by all the echoes of the mountains, told us that we had been heard, and that our companions were but a short distance off—in fact, at the expiration of a few minutes, they made their appearance, fatigued and worn out, asserting that they had distinctly seen Africa on the other side of the ocean; it is very possible they had done so, for the air of these parts is so pure that the eye can perceive objects at the distance of thirty or forty leagues. We were all very merry at supper, and by dint of playing the bagpipes with our skin of wine, we made it almost as flat as the wallet of a Castilian beggar. It was agreed that each of us should sit up in turn to attend the fire, an arrangement which was faithfully carried out, but the circumference of our circle, which was at first pretty considerable, kept becoming smaller and smaller. Every hour the cold became more intense, and at last we literally laid ourselves in the fire itself, so as to burn our shoes and pantaloons. Louis gave vent to his feelings in loud exclamation; he bewailed his *gaspacho* (cold garlic soup), his house, his bed, and even his wife. He made himself a formal promise, by everything he reverenced, never to be caught a second time attempting an ascent; he asserted that mountains are far more interesting when seen from below, and that a man must be a maniac to expose himself to the chance of breaking every bone in his body a hundred thousand times, and having his nose frozen off in the middle of the month of August, in Andalusia, and in sight of Africa. All night long he did nothing but grumble and groan in the same manner, and we could not succeed in reducing him to silence. Romero said nothing, and yet his dress was made of thin linen, and all that he had to wrap round him was a narrow piece of cloth.

At last the dawn appeared; we were enveloped in a cloud, and Romero advised me to begin our descent, if we wished to reach Granada before night. When it was sufficiently light to enable us to distinguish the various objects, I observed that Eugene was as red as a lobster nicely boiled, and at the same moment he made an analogous observation with respect to me, and did not feel himself bound to conceal

the fact. The young German and Louis were also equally red; Romero alone had preserved his peculiar tint, which resembled, by the way, that of a boot-top, and although his legs of bronze were naked, they had not undergone the slightest alteration. It was the biting cold, and the rarefaction of the air, that had turned us this color. Going up a mountain is nothing, because you look at the objects above you, but coming down with the awful depths before your eyes, is quite a different affair. At first the thing appeared impracticable, and Louis began screeching like a jay who is being picked alive. However, we could not remain forever in the Mulhacen, which is as little adapted for the purpose of habitation as any place in the known world, and so, with Romero at our head, we began our descent. It would be impossible, without laying ourselves open to the charge of exaggeration, to convey any notion of the paths, or rather the absence of paths, by which our dare-devil of a guide conducted us; never more break-neck obstacles crowded together in the course marked out for any steeple-chase, and I entertain strong doubts as to whether the feats of any "gentleman riders" ever outrivaled our exploits on the Mulhacen. The *Montagnes Russes* were mild declivities in comparison to the precipices with which we had to do. We were almost constantly standing up in our stirrups, and leaning back over the cruppers of our horses, in order to avoid performing an incessant succession of parabolas over their heads. All the lines of perspective seemed jumbled together; the streams appeared to be flowing up toward their source, the rocks vacillated and staggered on their bases, and the most distant objects appeared to be only two paces off; we had lost all feeling of proportion, an effect which is very common in the mountains, where the enormous size of the masses, and the vertical position of the different ranges, do not allow of your judging distances in the ordinary manner.

In spite of every difficulty we reached Granada without our horses having even made one false step, only they had got but one shoe left among them all. Andalusian horses —and ours were of the most authentic description—cannot

be equaled for mountain traveling. They are so docile, so patient, and so intelligent that the best thing the rider can do is to throw the reins on their necks and let them follow their own impulse.

We were impatiently expected, for our friends in the city had seen our fire burning like a beacon on the table-land of Mulhacen. I wanted to go and give an account of our perilous expedition to the charming Señoras B——, but was so fatigued that I fell asleep on a chair, holding my stocking in my hand, and I did not wake before ten o'clock the following morning, when I was still in the same position. Some few days afterward we quitted Granada, sighing quite as deeply as ever King Boabdil did.

Old Rotterdam

By EDMONDO DE AMICIS

AS we neared Rotterdam it rained and was foggy; we could see, as through a vail, only an immense confusion of ships, houses, wind-mills, towers, trees, and people in motion on the dikes and bridges; there were lights everywhere; a great city with such an aspect as I had never seen before, and which fog and darkness soon hid from me altogether. When I had taken leave of my traveling companions, and had put my luggage in order, it was night. "So much the better," I thought, as I entered a carriage; "I shall see the first Dutch city by night, which must be a strange spectacle." And, indeed, when M. Bismarck was at Rotterdam he wrote to his wife that at night he saw specters on the roofs.

It is difficult to make much of the city of Rotterdam, entering it at night. The carriage passed almost immediately over a bridge that resounded hollowly beneath it; and while I thought myself, and was, in fact, within the city, I saw with amazement on my right and left two rows of ships vanishing in the gloom.

Leaving the bridge, we passed through a street, lighted, and full of people, and found ourselves upon another bridge, and between two rows of vessels as before, and so on from bridge to street, from street to bridge, and, to increase the confusion, an illumination of lamps at the corners of houses, lanterns on masts of ships, light-houses on the bridges, small

lights under the houses, and all these lights reflected in the water. All at once the carriage stopped, people crowded about; I looked out and saw a bridge in the air. In answer to my question, some one said that a vessel was passing. We went on again, seeing a perspective of canals and bridges crossing and recrossing each other, until we came to a great square, sparkling with lights, and bristling with masts of ships, and finally we reached our inn in an adjacent street.

My first care on entering my room was to see whether Dutch cleanliness deserved its fame. It did, indeed, and may be called the religion of cleanliness. The linen was snow-white, the windows transparent as the air, the furniture shining like a crystal, the floors so clean that a microscope could not discover a black speck. There was a basket for waste paper, a tablet for scratching matches, a dish for cigar-ashes, a box for cigar-stumps, a spittoon, and a boot-jack; in short, there was no possible pretext for soiling anything.

My room examined, I spread a map of Rotterdam upon the table, and made some preparatory studies for the morrow.

It is a singular thing that the great cities of Holland, although built upon a shifting soil, and amid difficulties of every kind, have all great regularity of form. Amsterdam is a semicircle, the Hague square, Rotterdam an equilateral triangle. The base of the triangle is an immense dyke, which defends the city from the Meuse, and is called the Boompfes, signifying, in Dutch, small trees, from a row of little elms, now very tall, that were planted when it was first constructed.

Another great dyke forms a second bulwark against the river, which divides the city into two almost equal parts, and from the middle of the left side to the opposite angle. That part of Rotterdam which is comprised between the dykes is all canals, islands, and bridges, and is the new city; that which extends beyond the second dyke is the old city. Two great canals extend along the other two sides of the town to the apex, where they meet, and receive the waters of the river Rotte, which, with the affix of dam, or dyke, gives its name to the city.

Having thus fulfilled my conscientious duty as a traveler, and with many precautions not to soil, even by a breath, the purity of that jewel of a chamber, I abandoned myself with humility to my first Dutch bed.

Dutch beds—I speak of those in the hotels—are generally short and wide, and occupied in a great part by an immense feather pillow in which a giant's head would be overwhelmed. I may add that the ordinary light is a copper candlestick, of the size of a dinner-plate, which might sustain a torch, but holds, instead, a tiny candle about the size of a Spanish lady's finger.

In the morning I made haste to rise and issue forth into the strange streets, unlike anything in Europe. The first I saw was the Hoog Straat, a long, straight thoroughfare, running along the interior dike.

The unplastered houses, of every shade of brick, from the darkest red to light rose-color, chiefly two windows wide and two stories high, have the front wall rising above and concealing the roof, and in the shape of a blunt triangle surmounted by a parapet. Some of these pointed *façades* rise into two curves, like a long neck without a head; some are cut into steps like the houses that children build with blocks; some present the aspect of a conical pavilion, some of a village church, some of theatrical cabins. The parapets are in general surrounded by white stripes, coarse arabesques in plaster, and other ornaments in very bad taste; the doors and windows are bordered by broad white stripes; other white lines divide the different stories; the spaces between the doors in front are marked by white wooden panels, so that two colors, white and red, prevail everywhere, and as in the distance the darker red looks black, the prospect is half festive, half funereal, all the houses looking as if they were hung with white linen. At first I had an inclination to laugh, for it seemed impossible that it could have been done seriously, and that quite sober people lived in those houses. They looked as if they had been run up for a festival, and would presently disappear, like the paper framework of a grand display of fireworks.

A FLOOD IN HOLLAND

While I stood looking vaguely at the street, I noticed one house that puzzled me somewhat; and, thinking that my eyes had been deceived, I looked more carefully at it, and compared it with its neighbors. Turning into the next street, the same thing met my astonished gaze. There is no doubt about it; the whole city of Rotterdam presents the appearance of a town that has been shaken smartly by an earthquake, and is on the point of falling into ruin.

All the houses—in any street one may count the exceptions on his fingers—lean more or less, but the greater part of them so much that at the roof they lean forward at least a foot beyond their neighbors, which may be straight, or not so visibly inclined; one leans forward as if it would fall into the street; another backward, another to the left, another to the right; at some points six or seven contiguous houses all lean forward together, those in the middle most, those at the ends less, looking like a paling with the crowd pressing against it. At another point two houses lean together as if supporting one another. In certain streets the houses for a long distance lean all one way, like trees beaten by a prevailing wind; and then another long row will lean in the opposite direction, as if the wind had changed. Sometimes there is a certain regularity of inclination that is scarcely noticeable; and again, at crossings and in the smallest streets there is an indescribable confusion of lines, a real architectural frolic, a dance of houses, a disorder that seems animated. There are houses that nod forward as if asleep, others that start backward as if frightened; some bending toward each other, their roofs almost touching, as if in secret conference; some falling upon one another as if they were drunk; some leaning backward between others that lean forward like malefactors dragged onward by their guards; rows of houses that courtesy to a steeple, groups of small houses all inclined toward one in the middle, like conspirators in conclave.

Observe them attentively one by one, from top to bottom, and they are interesting as pictures.

In some, upon the summit of the *façade*, there projects

from the middle of the parapet a beam with cord and pulley to pull up baskets and buckets. In others, jutting from a round window, is the carved head of a deer, a sheep, or a goat. Under the head, a line of whitewashed stone or wood cuts the whole *façade* in half. Under this line there are two broad windows with projecting awnings of striped linen. Under these again, over the upper panes, a little green curtain. Below this green curtain two white ones, divided in the middle to show a suspended bird-cage or a basket of flowers. And below the basket or the cage, the lower panes are covered by a net-work of fine wire that prevents the passer-by from seeing into the room. Within, behind the netting, there stands a table covered with objects in porcelain, crystal, flowers, and toys of various kinds. Outside on the stone sill is a row of small flower-pots. From the stone sill or from one side projects an iron stem curving upward, which sustains two small mirrors joined in the form of a book, movable, and surmounted by another, also movable, so that those inside the house can see, without being seen, everything that passes in the street.

On some of the houses there is a lamp projecting between the two windows, and below is the door of the house or a shop-door. If it is a shop, over the door there is the carved head of a Moor with his mouth wide open, or that of a Turk with a hideous grimace; sometimes there is an elephant or a goose; sometimes a horse's or a bull's head, a serpent, a half-moon, a wind-mill, or an arm extended, the hand holding some object of the kind sold in the shop. If it is the house-door—always kept closed—there is a brass plate with the name of the occupant, another with a slit for letters, another with the handle of a bell, the whole, including the locks and bolts, shining like gold. Before the door there is a small bridge of wood, because in many of the houses the ground-floor or basement is much lower than the street; and before the bridge two little stone columns surmounted by two balls; two more columns in front of these are united by iron chains, the large links of which are in the form of crosses, stars, and polygons; in the space between

the street and the house are pots of flowers; and at the windows of the ground-floor more flower-pots and curtains. In the more retired streets there are bird-cages on both sides of the windows, boxes full of green growing things, clothes hung out to air or dry, a thousand objects and colors, like a universal fair.

But without going out of the older town, one need only to go away from the center to see something new at every step.

In some narrow, straight streets one may see the end suddenly closed as if by a curtain concealing the view; but it disappears as it came, and is recognized as the sail of a vessel moving in a canal. In other streets a net-work of cordage seems to stop the way; the rigging of vessels lying in some basin. In one direction there is a draw-bridge raised, and looking like a gigantic swing provided for the diversion of the people who live in those preposterous houses; and in another there is a wind-mill, tall as a steeple and black as an antique tower, moving its arms like a monstrous fire-work. On every side, finally, among the houses, above the roofs, between the distant trees, are seen masts of vessels, flags, and sails and rigging, reminding us that we are surrounded by water, and that the city is a seaport.

Meantime, the shops were opened and the streets became full of people. There was great animation, but no hurry, the absence of which distinguishes the streets of Rotterdam from those of London, between which some travelers find great resemblance, especially in the color of the houses and the grave aspect of the inhabitants. White faces, pallid faces, faces the color of Parmesan cheese; light hair, very light hair, reddish, yellowish; broad, beardless visages, beards under the chin and around the neck; blue eyes, so light as to seem almost without a pupil; women stumpy, fat, rosy, slow, with white caps and earrings in the form of corkscrews—these are the first things one observes in the crowd.

But for the moment it was not the people that first stimulated my curiosity. I crossed the Hoog Street, and found

myself in the new city. Here it is impossible to say if it be port or city, if land or water predominate, if there are more ships than houses, or *vice versâ*.

Broad and long canals divide the city into so many islands, united by draw-bridges, turning bridges, and bridges of stone. On either side of every canal extends a street, flanked by trees on one side and houses on the other. All these canals are deep enough to float large vessels, and all are full of them from one end to the other, except a space in the middle left for passage in and out—an immense fleet imprisoned in a city.

When I arrived it was the busiest hour, so I planted myself upon the highest bridge over the principal crossing. From thence were visible four canals, four forests of ships, bordered by eight files of trees; the streets were crammed with people and merchandise; droves of cattle were crossing the bridges; bridges were rising in the air, or opening in the middle, to allow vessels to pass through, and were scarcely replaced or closed before they were inundated by a throng of people, carts and carriages; ships came and went in the canals, shining like models in a museum, and with the wives and children of the sailors on the decks; boats darted from vessel to vessel; the shops drove a busy trade; servant-women washed the walls and windows; and all this moving life was rendered more gay and cheerful by the reflections in the water, the green of the trees, the red of the houses, the tall wind-mills showing their dark tops and white sails against the azure of the sky, and still more by an air of quiet simplicity not seen in any other northern city.

I took observations of a Dutch vessel. Almost all the ships crowded in the canals of Rotterdam are built for the Rhine and Holland; they have one mast only, and are broad, stout, and variously colored like toy ships. The hull is generally of a bright grass-green, ornamented with a red or a white stripe, or sometimes several stripes, looking like a band of different-colored ribbons. The poop is usually gilded. The deck and mast are varnished and shining like the cleanest of house-floors. The outside of the hatches,

the buckets, the barrels, the yards, the planks, are all painted red, with white or blue stripes. The cabin where the sailors' families are is colored like a Chinese kiosk, and has its windows of clear glass, and its white muslin curtains tied up with knots of rose-colored ribbon. In every moment of spare time sailors, women, and children are busy washing, sweeping, polishing every part with infinite care and pains; and when their little vessel makes its exit from the port, all fresh and shining like a holiday-coach, they all stand on the poop and accept with dignity the mute compliments which they gather from the glances of the spectators along the canals.

From canal to canal, and from bridge to bridge, I finally reached the dike of the Boompjes upon the Maas, where boils and bubbles all the life of the great commercial city.

On the left extends a long row of small many-colored steamboats, which start every hour in the day for Dordrecht, Arnhem, Gonda, Schiedam, Brilla, Zealand, and continually send forth clouds of white smoke and the sound of their cheerful bells. To the right lie the large ships which make the voyage to various European ports, mingled with fine three-masted vessels bound for the East Indies, with names written in golden letters—Java, Sumatra, Borneo, Samarang —carrying the fancy to those distant and savage countries like the echoes of distant voices. In front the Maas, covered with boats and barks, and the distant shore with a forest of beech-trees, wind-mills, and towers; and over all the unquiet sky, full of gleams of light and gloomy clouds, fleeting and changing in their constant movement, as if repeating the restless labor on the earth below.

On the Road in Russia

By D. MACKENZIE WALLACE

WHILST I was considering how I could get beyond the sphere of West European languages, a friend came to my assistance and suggested that I should go to his estate in the province of Novgorod, where I should find an intelligent, amiable parish priest, quite innocent of any linguistic acquirements. This proposal I at once adopted, and accordingly found myself one morning at a small station of the Moscow Railway, endeavoring to explain to a peasant in sheep's clothing that I wished to be conveyed to Ivánofka, the village where my future teacher lived. At that time I still spoke Russian in a very fragmentary and confused way—pretty much as Spanish cows are popularly supposed to speak French. My first remark therefore, being literally interpreted, was "Ivánofka. Horses. You can?" The point of interrogation was expressed by a simultaneous raising of the voice and the eyebrows.

"Ivánofka?" said the peasant, in an interrogatory tone of voice. In Russia, as in other countries, the peasantry when speaking with strangers like to repeat questions, apparently for the purpose of gaining time.

"Ivánofka," I replied.

"Now?"

"Now!"

After some reflection the peasant nodded and said something which I did not understand, but which I assumed to

Copyright by Underwood & Underwood.

RUSSIAN PEASANTS.

mean that he was open to consider proposals for transporting me to my destination.

"Rubles. How many?"

To judge by the knitting of the brows and the scratching of the head, I should say that that question gave occasion to a very abstruse mathematical calculation. Gradually the look of concentrated attention gave place to an expression such as children assume when they endeavor to get a parental decision reversed by means of coaxing. Then came a stream of soft words which were to me utterly unintelligible.

"How many?" I repeated.

"Ten!" said the peasant, in a hesitating, apologetic way, as if he were more than half ashamed of what he was saying.

"Ten!" I exclaimed, indignantly. "Two, enough!" and waving my hand to indicate that I should be no party to such a piece of extortion, I re-entered the station. As I reached the door I heard him say, "Master, master! Eight!" But I took no notice of the proposal.

I must not weary the reader with a detailed account of the succeeding negotiations, which were conducted with extreme diplomatic caution on both sides, as if a cession of territory or the payment of a war contribution had been the subject of discussion. Three times he drove away and three times returned. Each time he abated his pretensions, and each time I slightly increased my offer. At last, when I began to fear that he had finally taken his departure and had left me to my own devices, he re-entered the room and took up my baggage, indicating thereby that he agreed to my last offer.

The sum agreed upon—four rubles—would have been, under ordinary circumstances, more than sufficient for the distance, which was only about twenty miles; but before proceeding far I discovered that the circumstances were by no means ordinary, and I began to understand the pantomimic gesticulation which had puzzled me during the negotiations. Heavy rain had fallen without interruption for

several days, and now the track on which we were traveling could not, without poetical license, be described as a road. In some parts it resembled a water-course, in others a quag-mire, and at least during the first half of the journey I was constantly reminded of that stage in the work of creation when the water was not yet separated from the dry land. During the few moments when the work of keeping my balance and preventing my baggage from being lost did not engross all my attention, I speculated on the possibility of constructing a boat-carriage, to be drawn by a swift-footed hippopotamus, or some other animal that feels itself at home equally on land and in water. On the whole, the project seemed to me then as useful and as feasible as Fourrier's idea of making whales play the part of tug-steamers.

Fortunately for us, our two lean, wiry little horses did not object to being used as aquatic animals. They took the water bravely, and plunged through the mud in gallant style. The *telega* in which we were seated—a four-wheeled skeleton cart—did not submit to the ill-treatment so silently. It creaked out its remonstrances and entreaties, and at the more difficult spots threatened to go to pieces; but its owner understood its character and capabilities, and paid no attention to its ominous threats. Once, indeed, a wheel came off, but it was soon fished out of the mud and replaced, and no further casualty occurred.

The horses did their work so well that, when about midday we arrived at a village, I could not refuse to let them have some rest and refreshment—all the more as my own thoughts had begun to turn in that direction.

The village, as villages in that part of the country generally, consisted of two long parallel rows of wooden houses. The road—if a stratum of mud more than a foot in depth can be called by that name—formed the intervening space. All the houses turned their gables to the road, and some of them had pretensions to architectural decoration in the form of rude perforated woodwork. Between the houses, and in a line with them, were great wooden gates and high wooden fences, separating the court-yards from the road. Into one of these

yards, near the farther end of the village, our horses turned of their own accord.

"An inn?" I said, in an interrogative tone.

The driver shook his head and said something, in which I detected the word "friend." Evidently there was no hostelry for man and beast in the village, and the driver was using a friend's house for the purpose.

The yard was flanked on the one side by an open shed, containing rude agricultural implements which might throw some light on the agriculture of the primitive Aryans, and on the other side by the dwelling-house and stable. Both the house and stable were built of logs, nearly cylindrical in form, and placed in horizontal tiers.

Two of the strongest of human motives, hunger and curiosity, impelled me to enter the house at once. Without waiting for an invitation, I went up to the door—half protected against the winter snows by a small open portico—and unceremoniously walked in. The first apartment was empty, but I noticed a low door in the wall to the left, and passing through this, entered the principal room. As the scene was new to me, I noted the principal objects. In the wall before me were two small square windows looking out upon the road, and in the corner to the right, nearer to the ceiling than to the floor, was a little triangular shelf, on which stood a religious picture. Before the picture hung a curious oil lamp. In the corner to the left of the door was a gigantic stove, built of brick, and whitewashed. From the top of the stove to the wall on the right stretched what might be called an enormous shelf, six or eight feet in breadth. This is the so-called *palati*, as I afterward discovered, and serves as a bed for part of the family. The furniture consisted of a long wooden bench attached to the wall on the right, a big, heavy deal table, and a few wooden stools.

Whilst I was leisurely surveying these objects I heard a noise on the top of the stove, and, looking up, perceived a human face, with long hair parted in the middle, and a full yellow beard. I was considerably astonished by this ap-

parition, for the air in the room was stifling, and I had some difficulty in believing that any created being—except perhaps a salamander or a negro—could exist in such a position. I looked hard to convince myself that I was not the victim of a delusion. As I stared, the head nodded slowly and pronounced the customary form of greeting.

I returned the greeting slowly, wondering what was to come next.

"Ill, very ill!" sighed the head.

"I'm not astonished at that," I remarked, in an "aside." "If I were where you are I should be very ill too."

"Hot, very hot?" I remarked interrogatively.

"Nitchevo"—that is to say, "Not particularly." This remark astonished me all the more, as I noticed at that very moment that the body to which the head belonged was enveloped in a sheep-skin!

After living some time in Russia I was no longer surprised by such incidents, for I soon discovered that the Russian peasant has a marvelous power of bearing extreme heat as well as extreme cold. When a coachman takes his master or mistress to the theater or to a party, he never thinks of going home and returning at an appointed time. Hour after hour he sits placidly on the box, and though the cold be of an intensity such as is never experienced in our temperate climate, he can sleep as tranquilly as the lazzarone at midday in Naples. In that respect the Russian peasant seems to be first-cousin to the polar bear, but, unlike the animals of the arctic regions, he is not at all incommoded by excessive heat. On the contrary, he likes it when he can get it, and never omits an opportunity of laying in a reserve supply of caloric. He even delights in rapid transitions from one extreme to the other, as is amply proved by a curious custom which deserves to be recorded.

The reader must know that in the life of the Russian peasantry the weekly vapor-bath plays a most important part. It has even a certain religious signification, for no good orthodox peasant would dare to enter a church after

being soiled by certain kinds of pollution without cleansing himself physically and morally by means of the bath. In the weekly arrangements it forms the occupation for Saturday afternoon, and care is taken to avoid thereafter all pollution until after the morning service on Sunday. Many villages possess a public or communal bath of the most primitive construction, but in some parts of the country—I am not sure how far the practice extends—the peasants take their vapor-bath in the household oven in which the bread is baked! In all cases the operation is pushed to the extreme limit of human endurance—far beyond the utmost limit that can be endured by those who have not been accustomed to it from childhood. For my own part, I only made the experiment once, and when I informed my attendant that my life was in danger from congestion of the brain, he laughed outright, and told me that the operation had only begun. Most astounding of all—and this brings me to the fact which led me into this digression—the peasants in winter often rush out of the bath and roll themselves in snow! This aptly illustrates a common Russian proverb, which says that what is health to the Russian is death to the German.

EUROPE

Perils of Alpine Climbing

By EDWARD WHYMPER

WE started from Zermatt on the thirteenth of July at half-past five, on a brilliant and perfectly cloudless morning. We were eight in number—Croz, old Peter and his two sons, Lord Francis Douglas, Hadow, Hudson and I. To insure steady motion, one tourist and one native walked together. The youngest Taugwalder fell to my share, and the lad marched well, proud to be on the expedition and happy to show his powers. The wine-bags also fell to my lot to carry, and throughout the day, after each drink, I replenished them secretly with water, so that at the next halt they were found fuller than before! This was considered a good omen, and little short of miraculous.

On the first day we did not intend to ascend to any great height, and we mounted, accordingly, very leisurely, picked up the things which were left in the chapel at Schwarzsee at eight-twenty, and proceeded thence along the ridge connecting the Hörnli with the Matterhorn. At half-past eleven we arrived at the base of the actual peak, then quitted the ridge and clambered round some ledges on to the eastern face. We were now fairly upon the mountain, and were astonished to find that places which from the Riffel, or even from the Furggengletscher, looked entirely impracticable, were so easy that we could run about.

Before twelve o'clock we had found a good position for the tent, at a height of 11,000 feet. Croz and young

Copyright by Underwood & Underwood.

CLIMBING THE ALPS.

Peter went on to see what was above, in order to save time on the following morning. They cut across the heads of the snow-slopes which descended toward the Furggengletscher, and disappeared round a corner, but shortly afterward we saw them high up on the face, moving quickly. We others made a solid platform for the tent in a well-protected spot, and then watched eagerly for the return of the men. The stones which they upset told that they were very high, and we supposed that the way must be easy. At length, just before three P.M., we saw them coming down, evidently much excited. "What are they saying, Peter?" "Gentlemen, they say it is no good." But when they came near we heard a different story: "Nothing but what was good—not a difficulty, not a single difficulty. We could have gone to the summit and returned to-day easily!"

We passed the remaining hours of daylight—some basking in the sunshine, some sketching or collecting—and when the sun went down, giving, as it departed, a glorious promise for the morrow, we returned to the tent to arrange for the night. Hudson made tea, I coffee, and we then retired each one to his blanket-bag; the Taugwalders, Lord Francis Douglas and myself occupying the tent, the others remaining by preference outside. Long after dusk the cliffs above echoed with our laughter and with the songs of the guides, for we were happy that night in camp, and feared no evil.

We assembled together outside the tent before dawn on the morning of the fourteenth, and started directly it was light enough to move. Young Peter came on with us as a guide, and his brother returned to Zermatt. We followed the route which had been taken on the previous day, and in a few minutes turned the rib which had intercepted the view of the eastern face from our tent platform. The whole of this great slope was now revealed, rising for 3000 feet like a huge natural staircase. Some parts were more and others were less easy, but we were not once brought to a halt by any serious impediment, for when an obstruction was met in front it could always be turned to the right or to the left. For the greater part of the way there was

indeed no occasion for the rope, and sometimes Hudson led, sometimes myself. At six-twenty we had attained a height of 12,800 feet, and halted for half an hour; we then continued the ascent without a break until nine fifty-five, when we stopped for fifty minutes at a height of 14,000 feet. Twice we struck the north-eastern ridge, and followed it for some little distance—to no advantage, for it was usually more rotten and steep, and always more difficult, than the face. Still, we kept near to it, lest stones perchance might fall.

We had now arrived at the foot of that part which, from the Riffelberg or from Zermatt, seems perpendicular or overhanging, and could no longer continue upon the eastern side. For a little distance we ascended by snow upon the *arête*—that is, the ridge—descending toward Zermatt, and then by common consent turned over to the right, or to the northern side. Before doing so we made a change in the order of ascent. Croz went first, I followed, Hudson came third; Hadow and old Peter were last. "Now," said Croz as he led off—"now for something altogether different." The work became difficult, and required caution. In some places there was little to hold, and it was desirable that those should be in front who were least likely to slip. The general slope of the mountain at this part was less than forty degrees, and snow had accumulated in, and had filled up, the interstices of the rock-face, leaving only occasional fragments projecting here and there. These were at times covered with a thin film of ice, produced from the melting and refreezing of the snow. It was the counterpart, on a small scale, of the upper seven hundred feet of the Pointe des Écrins; only there was this material difference—the face of the Écrins was about, or exceeded, an angle of fifty degrees, and the Matterhorn face was less than forty degrees. It was a place over which any fair mountaineer might pass in safety, and Mr. Hudson ascended this part, and, as far as I know, the entire mountain, without having the slightest assistance rendered to him upon any occasion. Sometimes, after I had taken a hand from Croz or received a pull, I turned to offer

the same to Hudson, but he invariably declined, saying it was not necessary. Mr. Hadow, however, was not accustomed to this kind of work, and required continual assistance. It is only fair to say that the difficulty which he found at this part arose simply and entirely from want of experience.

This solitary difficult part was of no great extent. We bore away over it at first nearly horizontally, for a distance of about four hundred feet, then ascended directly toward the summit for about sixty feet, and then doubled back to the ridge which descends toward Zermatt. A long stride round a rather awkward corner brought us to snow once more. The last doubt vanished! The Matterhorn was ours! Nothing but two hundred feet of easy snow remained to be surmounted!

You must now carry your thoughts back to the seven Italians who started from Breuil on the eleventh of July. Four days had passed since their departure, and we were tormented with anxiety lest they should arrive on the top before us. All the way up we had talked of them and many false alarms of "men on the summit" had been raised. The higher we rose the more intense became the excitement. What if we should be beaten at the last moment! The slope eased off, at length we could be detached, and Croz and I, dashing away, ran a neck-and-neck race which ended in a dead heat. At one-forty P.M. the world was at our feet and the Matterhorn was conquered! Hurrah! Not a footstep could be seen.

It was not yet certain that we had not been beaten. The summit of the Matterhorn was formed of a rudely level ridge, about three hundred and fifty feet long, and the Italians might have been at its farther extremity. I hastened to the south end, scanning the snow right and left eagerly. Hurrah again! it was untrodden. "Where were the men?" I peered over the cliff, half doubting, half expectant. I saw them immediately, mere dots on the ridge, at an immense distance below. Up went my arms and my hat. "Croz! Croz! come here!" "Where are they, monsieur?" "There—don't you see them down there?" "Ah! the

coquins! they are low down." "Croz, we must make those fellows hear us." We yelled until we were hoarse. The Italians seemed to disregard us—we could not be certain. "Croz, we *must* make them hear us—they *shall* hear us!" I seized a block of rock and hurled it down, and called upon my companion in the name of friendship to do the same. We drove our sticks in and pried away the crags, and soon a torrent of stones poured down the cliffs. There was no mistake about it this time. The Italians turned and fled.

Still, I would that the leader of that party could have stood with us at that moment, for our victorious shouts conveyed to him the disappointment of the ambition of a lifetime. He was the man, of all those who attempted the ascent of the Matterhorn, who most deserved to be the first upon its summit. He was the first to doubt its inaccessibility, and he was the only man who persisted in believing that its ascent would be accomplished. It was the aim of his life to make the ascent from the side of Italy for the honor of his native valley. For a time he had the game in his hands: he played it as he thought best, but he made a false move and lost it. Times have changed with Carrel. His supremacy is questioned in the Val Tournanche; new men have arisen, and he is no longer recognized as the chasseur above all others; but so long as he remains the man that he is to-day it will not be easy to find his superior.

The others had arrived, so we went back to the northern end of the ridge. Croz now took the tent-pole and planted it in the highest snow. "Yes," we said, "there is a flagstaff, but where is the flag?" "Here it is," he answered, pulling off his blouse and fixing it to the stick. It made a poor flag, and there was no wind to float it out, yet it was seen all around. They saw it at Zermatt, at the Riffel, in the Val Tournanche. At Breuil the watchers cried "Victory is ours!" They raised "bravos" for Carrel and "vivas" for Italy, and hastened to put themselves *en fête*. On the morrow they were undeceived. All was changed: the explorers returned sad—cast-down—disheartened—con-

founded—gloomy. "It is true," said the men. "We saw them ourselves—they hurled stones at us! The old traditions are true—there are spirits on the top of the Matterhorn!"

We returned to the southern end of the ridge to build a cairn, and then paid homage to the view. The day was one of those superlatively calm and clear ones which usually precede bad weather. The atmosphere was perfectly still and free from all clouds or vapors. Mountains fifty—nay, a hundred—miles off, looked sharp and near. All their details—ridge and crag, snow and glacier—stood out with faultless definition. Pleasant thoughts of happy days in bygone years came up unbidden as we recognized the old, familiar forms. All were revealed—not one of the principal peaks of the Alps was hidden. I see them clearly now—the great inner circles of giants, backed by the ranges, chains and *massifs*. First came the Dent Blanche, hoary and grand; the Gabelhorn and pointed Rothhorn, and then the peerless Weisshorn; the towering Mischabelhörner, flanked by the Allaleinhorn, Strahlhorn and Rimpfischhorn; then Monte Rosa—with its many Spitzes—the Lyskamm and the Breithorn. Behind were the Bernese Oberland, governed by the Finsteraarhorn, the Simplon and St. Gothard groups, the Disgrazia and the Orteler. Toward the south we looked down to Chivasso on the plain of Piedmont, and far beyond. The Viso—one hundred miles away—seemed close upon us; the Maritime Alps—one hundred and thirty miles distant—were free from haze. Then came my first love—the Pelvoux; the Écrins and the Meije; the clusters of the Graians; and lastly, in the west, gorgeous in the full sunlight, rose the monarch of all—Mont Blanc. Ten thousand feet beneath us were the green fields of Zermatt, dotted with chalets, from which blue smoke rose lazily. Eight thousand feet below, on the other side, were the pastures of Breuil. There were forests black and gloomy, and meadows bright and lively; bounding waterfalls and tranquil lakes; fertile lands and savage wastes; sunny plains and frigid plateaux. There were the most rugged forms and

the most graceful outlines—bold, perpendicular cliffs and gentle, undulating slopes; rocky mountains and snowy mountains, somber and solemn or glittering and white, with walls, turrets, pinnacles, pyramids, domes, cones, and spires! There was every combination that the world can give, and every contrast that the heart could desire.

We remained on the summit for one hour—

One crowded hour of glorious life.

It passed away too quickly, and we began to prepare for the descent.

[On another occasion Mr. Whymper had a dangerous fall, which he describes as follows.]

Generally speaking, the angles on the Matterhorn are too steep to allow the formation of considerable beds of snow, but here there is a corner which permits it to accumulate, and it is turned to gratefully, for by its assistance one can ascend four times as rapidly as upon the rocks.

The Tower was now almost out of sight, and I looked over the central Pennine Alps to the Grand Combin and to the chain of Mont Blanc. My neighbor, the Dent d'Hérens, still rose above me, although but slightly, and the height which had been attained could be measured by its help. So far, I had no doubt about my capacity to descend that which had been ascended; but in a short time, on looking ahead, I saw that the cliffs steepened, and I turned back (without pushing on to them and getting into inextricable difficulties), exulting in the thought that they would be passed when we returned together, and that I had without assistance got nearly to the height of the Dent d'Hérens, and considerably higher than any one had been before. My exultation was a little premature.

About five P.M. I left the tent again, and thought myself as good as at Breuil. The friendly rope and claw had done good service, and had smoothed all the difficulties. I lowered myself through the Chimney, however, by making a fixture of the rope, which I then cut off and left behind, as there was enough and to spare. My axe had proved a great

nuisance in coming down, and I left it in the tent. It was not attached to the bâton, but was a separate affair—an old navy boarding-axe. While cutting up the different snow-beds on the ascent, the bâton trailed behind fastened to the rope; and when climbing the axe was carried behind, run through the rope tied round my waist, and was sufficiently out of the way, but in descending, when coming down face outward (as is always best where it is possible), the head or the handle of the weapon caught frequently against the rocks, and several times nearly upset me. So, out of laziness if you will, it was left in the tent. I paid dearly for the imprudence.

The Col du Lion was passed, and fifty yards more would have placed me on the great Staircase, down which one can run. But on arriving at an angle of the cliffs of the Tête du Lion, while skirting the upper edge of the snow which abuts against them, I found that the heat of the two past days had nearly obliterated the steps which had been cut when coming up. The rocks happened to be impracticable just at this corner, so nothing could be done except to make steps afresh. The snow was too hard to beat or tread down, and at the angle it was all but ice: half a dozen steps only were required, and then the ledges could be followed again. So I held to the rock with my right hand, and prodded at the snow with the point of my stick until a good step was made, and then, leaning round the angle, did the same for the other side. So far well, but in attempting to pass the corner (to the present moment I cannot tell how it happened) I slipped and fell.

The slope was steep on which this took place, and descended to the top of a gully that led down through two subordinate buttresses toward the Glacier du Lion, which was just seen, a thousand feet below. The gully narrowed and narrowed until there was a mere thread of snow lying between two walls of rock, which came to an abrupt termination at the top of a precipice that intervened between it and the glacier. Imagine a funnel cut in half through its length, placed at an angle of forty-five degrees, with its point

below and its concave side uppermost, and you will have a fair idea of the place.

The knapsack brought my head down first, and I pitched into some rocks about a dozen feet below: they caught something, and tumbled me off the edge, head over heels, into the gully. The bâton was dashed from my hands, and I whirled downward in a series of bounds, each longer than the last—now over ice, now into rocks—striking my head four or five times, each time with increased force. The last bound sent me spinning through the air, in a leap of fifty or sixty feet, from one side of the gully to the other, and I struck the rocks, luckily, with the whole of my left side. They caught my clothes for a moment, and I fell back on to the snow with motion arrested: my head fortunately came the right side up, and a few frantic catches brought me to a halt in the neck of the gully and on the verge of the precipice. Bâton, hat, and veil skimmed by and disappeared, and the crash of the rocks which I had started, as they fell on to the glacier, told how narrow had been the escape from utter destruction. As it was, I fell nearly two hundred feet in seven or eight bounds. Ten feet more would have taken me in one gigantic leap of eight hundred feet on to the glacier below.

The situation was still sufficiently serious. The rocks could not be left go for a moment, and the blood was spurting out of more than twenty cuts. The most serious ones were in the head, and I vainly tried to close them with one hand while holding on with the other. It was useless: the blood jerked out in blinding jets at each pulsation. At last, in a moment of inspiration I kicked out a big lump of snow and stuck it as a plaster on my head. The idea was a happy one, and the flow of blood diminished: then, scrambling up, I got, not a moment too soon, to a place of safety, and fainted away. The sun was setting when consciousness returned, and it was pitch dark before the great Staircase was descended; but by a combination of luck and care the whole 4800 feet of descent to Breuil was accomplished without a slip or once missing the way.

I slunk past the cabin of the cowherds, who were talking and laughing inside, utterly ashamed of the state to which I had been brought by my imbecility, and entered the inn stealthily, wishing to escape to my room unnoticed. But Favre met me in the passage, demanded, "Who is it?" screamed with fright when he got a light, and aroused the household. Two dozen heads then held solemn council over mine, with more talk than action. The natives were unanimous in recommending that hot wine (syn. vinegar), mixed with salt, should be rubbed into the cut. I protested, but they insisted. It was all the doctoring they received. Whether their rapid healing was to be attributed to that simple remedy or to a good state of health, is a question; they closed up remarkably soon, and in a few days I was able to move again.

As it seldom happens that one survives such a fall, it may be interesting to record what my sensations were during its occurrence. I was perfectly conscious of what was happening, and felt each blow, but, like a patient under chloroform, experienced no pain. Each blow was, naturally, more severe than that which preceded it, and I distinctly remember thinking, "Well, if the next is harder still, that will be the end!" Like persons who have been rescued from drowning, I remember that the recollection of a multitude of things rushed through my head, many of them trivialities or absurdities which had been forgotten long before; and, more remarkable, this bounding through space did not feel disagreeable. But I think that in no very great distance more consciousness as well as sensation would have been lost, and upon that I base my belief, improbable as it seems, that death by a fall from a great height is as painless an end as can be experienced.

The battering was very rough, yet no bones were broken. The most severe cuts were, one four inches long on the top of the head, and another of three inches on the right temple; this latter bled frightfully. There was a formidable looking cut, of about the same size as the last, on the palm of the left hand, and every limb was grazed or cut

more or less seriously. The tips of the ears were taken off, and a sharp rock cut a circular bit out of the side of the left boot, sock, and ankle at one stroke. The loss of blood, although so great, did not seem to be permanently injurious. The only serious effect has been the reduction of a naturally retentive memory to a very commonplace one; and although my recollections of more distant occurrences remain unshaken, the events of that particular day would be clean gone but for the few notes which were written down before the accident.

EUROPE

The Midnight Sun

By LANGLEY COLERIDGE

NORWAY is a land of pure delight to the traveler. There are no picture-galleries to make one's neck ache ; no museum to make the weary feet throb ; no promenades ; no sherry-cobblers to sip while bands play in the gardens ; no continuations of London and Brighton. There are no crowds ; you may see a magnificent waterfall all by yourself, or ascend a hundred Rigis without meeting a soul. There are no loafers ; and you may get into boats and out of boats, into carrioles and out of carrioles, without one humpbacked beggar-boy or man with his eye in a sling to whine at you, or one officious person getting in the way in order to be paid for it. There are no mammoth hotels, where you have to climb a dozen flights of stairs before you can reach your bed ; no billiards when once you have left the three chief towns ; no stuffy railways to whiz you past the best scenery ; no dressing for dinner.

Now, all these things, to one who has been over and over again to the most civilized places in the world, are very refreshing ; and yet these are perhaps but minor points, and do not explain the secret of the great charm of Norway. Rip Van Winkle's was a wonderful sleep ; he woke and found the world had gone forward a hundred years ; but the traveler who sleeps on the North Sea and wakes up in the morning in Norway has had a more wonderful sleep. He wakes and finds the world has gone back half a mil-

lennium! Southward the countries of Europe have struggled and slaved in the race for the perfection of civilization, while Norway is as it was in the beginning. Southward, the countries have obeyed the watchword, "Forward!" Norway has obeyed the signal, "As you were!"

Now, fancy yourself arriving at a little village in an out-of-the-way place in Norway. Nobody flutters about your carriole to escort you to a hotel, but you enter the "station," a low, rambling wooden structure, with diffidence. You see the lady of the house and shake hands with her; you ask her to be good enough to let you stay there the night; you enter a bedroom, where everything is plain as a deal box, but clean as a Dutch tulip. Then you sit down with the family in the general room to your meal. It will assuredly consist of either trout and salmon, or salmon and trout, with perhaps an egg, perhaps potatoes, perhaps black bread. No Bass, but perhaps some Norsh Öl, a very pleasant beverage. After supper you will smoke a pipe with your landlord, who will probably invite you to see the pigs, or will lend you a hand to splice up any broken harness of your carriole.

About nine or ten o'clock you will go to bed, in the broad daylight if it be summer-time, and in the morning you will wake up, finding the landlady's daughter at your bedside, with a delicious cup of hot coffee and a natty little roll, or perchance a biscuit. And then, still early in the morning, you will bid farewell as to old friends, you will shake hands all round, and away in your carriole to drive through romantic scenery, and to feel as though Norway had been made specially for you.

Before you have been two days in the country you will love the quaint, unsophisticated people, so hearty in their kindness, so ungrudging in their hospitality, and their Old-World manners and customs, so genuine in an age of sham, so solid in an age of veneer. One great charm of Norway, then, is its people; another, and perhaps more to be appreciated by some, is its scenery.

"Is it like Switzerland?" No; Norway is only like

Norway. It is not so grand as regards the height of its mountains, yet its grandeur is far more solemn. It has a dozen fjords more startling than the Lake of Lucerne; in a day's journey you will pass waterfalls and cascades which would make a fortune to "proprietors" in Switzerland, and are not so much as mentioned in the Norwegian guide-books. Switzerland is grand beyond compare, but it must be confessed it is a monotonous grandeur. Not so with Norway: its charms of scenery are varied as they are unique. A coast wild and rugged; mighty pine-forests, interminable; lakes beautiful as Windermere; fjords awful in their grandeur; valleys rich in their fertility; fields bare and barren; sport with the gun, sport with the rod; these and a hundred other charms may be entered in the catalogue.

But all these are outweighed by the strange, weird beauty and grandeur of the neighborhood of the North Cape. I know of nothing that comes within the range of tourist experiences that will make a more lasting impression on the memory than a day or two in the region of the midnight sun.

For the student, the professional man, the overworked generally, and especially those whose brains are over-worked, there is no tour that will be more beneficial than the one I propose briefly to sketch.

Go to Christiansand. Then, if you have never been to Norway, proceed to Christiania, and, after staying a day or two in that interesting town and neighborhood, continue your journey either to Trondhjem or Bergen, it matters not which, or, better still, if you can, do both. The trip to one, the other, or both, will give you a good idea of scenery in Norway. At either Bergen or Trondhjem take the steamer for Hammerfest. And then will commence one of the most delightful voyages it is possible to make.

The steamer keeps close to the shore, and the shore is the most curious in the world; you have but to look at a map to see its wonderful indentations; you cannot realize them until you find yourself now in a bay or a cove, now among groups of islands, then in the midst of a fjord, with

sheer rocks rising perpendicularly from the sea, and anon in the harbor of a little town, with groups of wondering peasantry around you. You will see some parts of the coast so wild that you cannot credit the fact that human beings can be found there, and you will find verdant nooks so peaceful and pretty that you will be tempted to think that there, away from the world, you would like to build your house and finish up your days. At one time you will come to the haunts of water-fowl innumerable ; at another a shoal of whales will be around you.

The towns and villages at which you will halt will have a special charm. The curious costumes of the people ; the antique architecture of their houses and churches ; the good but old-fashioned contrivances connected with their fishing avocations—all these will be novel.

Among the red-letter days of the trip will be a sail among the Loffoden Islands, "jagged as the jaws of a shark," and swarming with sea-fowl ; a glimpse at the neighborhood of the Maelström, so celebrated in fable ; a visit to a Lapp encampment, and an occasional stroll through some of the towns at which the steamer stays. Tromsö is one of these halting-places : it is a modern town, which has grown rapidly. It was only founded in 1794, and in 1816 had but three hundred inhabitants ; now, owing to the success of its herring-fishery, it has grown strangely for Norway, and has a population of over 5000. It is charmingly situated on an island, and its rich fertility contrasts most singularly with the wildness of the surrounding mountains. Hammerfest, too, is interesting, not only because it is the most northerly town in the world, and because "in the season" it is crowded with representatives of all nations, who come here to trade, but because here you are within the limits of the region of the Midnight Sun, and from here you will take your boat (unless you continue by the Vadsö steamer) for the North Cape.

The effect of the midnight sun has been variously described. Carlyle revels in the idea that while all the nations of the earth are sleeping, you here stand in the presence of

that great power which will wake them all; Bayard Taylor delights in the gorgeous coloring; and each traveler has some new poetic thought to register. For myself the midnight sun has a solemnity which nothing else in nature has. Midnight is solemn in the darkness; it is a hundredfold more solemn in the glare of sunlight, richer than ever is sun under tropical skies. It is "silence, as of death;" not the hum of a bird, not the buzz of an insect, not the distant voice of a human being. Silence palpable. You do not feel drowsy, though it is midnight; you feel a strange fear creep over you as if in a nightmare, and dare not speak; you think what if it should be true that the world is in its last sleep, and you are the last living ones, yourselves on the verge of the Eternal Ocean?

It is amusing, afterwards, to think of the way in which you landed on your excursion to the North Cape; how everyone seemed impressed with the same idea that it was a sacrilege to break the silence, and the party that set forth in high spirits had settled down into the gravity of a funeral *cortège*. And it is strange how the stillness and awfulness, felt while in the little boat upon the silent sea, held you spellbound and entranced; and the spell could not be broken until you set to work on the difficult climb to the head of the North Cape. And when you reached the top you felt—well, I don't know how.

To some standing on the highest part of the plateau, a thousand feet above the sea, and looking away to that great unknown Arctic Ocean, it has seemed as if they had come to the end of the earth; that they were gazing upon the confines of the eternal regions; that they saw in the distance the outlines of the land of which it is said, "There is no night there."

Every tourist mind has its own particular magnet. I do not know what event in the history of a tourist life most attracts my memory. No one can ever forget the day when he first gazes upon Jerusalem from the Mount of Olives; or Damascus seen from the Mount of Mohammed; or the sunny morning when he rounds the Golden Horn, and Constantinople bursts on the view.

These are memories which never grow dim ; and I am inclined to think that when a tourist finds himself in a small boat at midnight, drawing near to the North Cape in the midst of the most gorgeous sunlight ever seen, he has found a sensation which will be green in his memory to the day of his death.

In this brief paper I have not found time to be practical. The trip to the North Cape should be made in June or July ; it may be made in August or September, and in the latter month there is a chance of seeing the first blushes of the Aurora Borealis. I am much inclined to think that a winter excursion to the North Cape would be one of the grandest sensations that the tourist's heart could wish, but of this I am not in a position to judge.

If my readers are like myself, they never bring one summer trip to a close before they have arranged in their own minds for the next ; and so I throw out the hint that ere the North Cape shall be scribbled over with the names of Smith and Jones ; ere excursion boats, with Ethiopian serenaders on board, shall put forth from Hammerfest ; ere a big hotel shall stand upon the summit, and a man shall blow a horn to announce when "the sun is at its best," it will be well to consider whether a trip to the North Cape is not worth serious consideration.

EUROPE

Old Antwerp

By ROSE G. KINGSLEY

IN Flanders there are quaint cities, beautiful buildings, glorious pictures, and a tangled mass of historic interest.

Thus it came to pass that we went to Brussels, and three days later we were steaming out into the (to us) unknown, on our way to Antwerp. Our three days had been chiefly spent in making closer acquaintance with Flemish art in the museum of the capital—a collection most valuable and typical, a collection too often ignored or hastily glanced through by the tourist, who, if by chance he cares for such things, hurries on to see Memling at Bruges, Van Eyck at Ghent, or Rubens at Antwerp. He forgets, or does not know, that, as Fromentin justly says, "Belgium is a magnificent book of art, of which, happily for provincial glory, the chapters are scattered everywhere, but of which the preface is at Brussels, and only at Brussels. To all who are tempted to skip the preface in order to get at the book, I should say they are wrong—that they open the book too soon and will read it ill." We therefore studied the preface with some care, and now were about to turn the first page of the book itself. . . .

Everything seemed new, pretty, and amusing, as the train cleared the last of the suburbs of Brussels. The sun shone on the long lines of poplars, just burnished with autumn's gold, which cast their shadows on damp green meadows ruled off into squares with almost mathematical precision. Here a man in a brown apron and brilliant crim-

son sleeves was raking up the aftermath off a water-meadow. There a girl in a blue frock was herding black and white cows, and we began to think of Cuyp. Then we saw, across flat stretches of smiling country, pointed steeples and red roofs, showing behind thick groups of trees in a soft blue haze, while an old wind-mill on blackened wooden stilts, a little donkey-cart, and a group of crimson-jacketed peasants in the foreground made us think of some of Teniers the Younger's landscapes, and recollect that we must be close to Drei Torren, his house at Perck. Then came Malines, our first brown canal, with red-sailed, green- and black-painted barges, the great cathedral rising through a screen of trees over scarlet house-roofs, a picturesque crowd on the platform of burly, shovel-hatted priests, nuns with black shawls over their white caps, men with blue blouses and brilliant yellow *sabots*—and we thought of Prout. It was all so absurdly like what we had expected, with a difference —just the difference between art and nature.

Then came more flat country, more canals, more fields, more absurd cocky little wheat-ricks, with hardly corn enough in them to make a loaf of bread, more white and purple lupins on the embankments, more red-tiled roofs, half thatch, half tile, which M—— pronounced "most æsthetic," more sun, yes, that was perhaps the best of all. Then a great green fort, and we were at Antwerp.

We hardly gave ourselves time to swallow a hasty *déjeûner*, and then set forth with the charming feeling that we had nothing to do but amuse ourselves. We had not an idea of where we were going, or what we meant to see. All was new, therefore all to us was worth seeing. Only a vague impression floated in our minds that we ought before long to find our way to the cathedral. It was not hard to find; in fact, it was impossible to miss it, for, as we sauntered down the Place de Meir, the golden clock-face on the steeple shone before us like a beacon over the high house roofs, and

> "Far up, the carillon did search
> The wind."

We pushed our way past the odious touters, clamorously asking in vile French and still viler English if we wished to see the cathedral? had we seen it? did we know we ought to see it? finally, of course, should they show it to us? We were in too mighty a presence to heed them. Above us, almost painfully high, rose the great steeple, pointing up to the clear blue sky. We stood at a corner of the old Marché and gazed and gazed, hardly able at first to take in the idea of its real height, foreshortened as it is when one stands so near. It grew upon us, revealed itself to us, as we looked and wondered, and ever after, while in the city, we seemed to feel its protecting presence, even though it might be hidden from our eyes. And we thought how often must weary sailors, beating up the stormy waters of the North Sea, have longed for a glimpse of that weather-stained tower, token to them of home and safety after some perilous voyage to bring gold and sugar from the New World, or priceless stuffs and spices from the Indies and far Cathay! Or as painters, after long study in the schools of Rome and Venice, made their slow way northward once more across the Alps, to add fresh glory to the Guild of St. Luke, how eagerly they must have watched for the first sight of their cathedral, pointing heavenward out of the flat misty plain, as if to lift their minds from earth into some purer atmosphere!

Yet, splendid as is the casket, still more precious is the treasure it contains. Many men have built cathedrals. There has been but one Rubens; and of all Rubens' works, the "Descent from the Cross" enshrined in Antwerp Cathedral is, one may venture to say without fear of criticism, unquestionably the most wonderful and beautiful. There is a sobriety, a reticence, about it in color, in movement, in drawing, in the exquisite balance of light and shade, in the nobility and yet tenderness of conception, which one hardly looks for in the painter, splendid though he be, of the Assumption of the Virgin over the high altar close by, still less of the gorgeous but revolting Marie de Médicis series in the Louvre. To quote Fromentin once more, "*Tout y est*

contenu, concis, laconique comme dans une page du texte sacré." Let those who judge him merely by pictures such as the last go to Antwerp, and, casting aside all preconceived ideas, say then whether Peter Paul Rubens shall not be pardoned all his carelessness, his coarseness—yes, even his horrors—and be to them henceforth the painter of the noble and majestic "Descent from the Cross."

It was long before we could summon resolution to leave the cathedral. Half a dozen times we started, as many times we turned back to the great triptych to impress some detail more firmly on our minds; and at last, when the door swung to behind us, and we saw the great master's statue standing in dusty sunshine in the Place Verte, we were in no humor for more sight-seeing. So we wandered happily and aimlessly on, now enchanted by some *pignon espagnol*, the quaint gable running up in a series of steps, which was introduced, some say, by the Spaniards, now stopping to scribble down the details of a bit of costume, or to look at a street shrine on a corner house, with its figure and lamp and tinsel flowers, until at last we found ourselves on the quays.

Here, where Van Noort, where Rubens, where Jordaens made studies among the rude fishermen for their pictures of the Miraculous Draught—here, where generations of painters from their day down to our own have loved to dwell upon the changing aspects of the quiet river, the hurrying quays, the picturesque people—here was indeed a spot where we humble disciples of Apelles might hope to gather inspiration from the example of the great departed. So we hunted out a pile of wood on the very brink of the river, a quiet corner where we ran no risk of being trampled underfoot by gigantic Flemish dray-horses or knocked down by heavily laden wagons; and there we sat peacefully, sketching the long reaches of the Scheldt bathed in a flood of golden haze. Up it sailed long low boats, floating past us with full red sails, flat, faint, wooded shores behind them, a tall smoking chimney or little church-spire breaking the blue line of the trees here and there. The river reaches were full of repose to eye and mind alike, and our thoughts turned instinctively

to Van de Velde, to his glassy water, where little gleams catch the curl of some lazy ripple, and his skiffs and schooners floating in a vail of filmy gold, which warms his usual pearly grays, while they in turn give a sober undertone to the golden glory. A contrast to the quiet river was the foreground of the picture, where a steamer was lading for some distant voyage, funnels, rigging, hull, a great mass of black and brown against the pale golden water, and the bustling quay, where horses, men, carriages, foot-passengers, long low trolleys—apparently on only two wheels, so minute were the front pair—piled high with bales and barrels, were jumbled in inextricable confusion.

We were working away, thankful that every one was too full of his own business to care to look at us, when suddenly a pleasant smell of burning made us wonder whether the municipality were trying to fumigate the town and overpower the very unsavory odors around us. Presently blacks began to settle on our sketch-books. Then burning morsels flew through the air, and, turning round, we saw that a quantity of bales standing on the quay twenty yards behind us were on fire. Half a dozen bystanders looked on with true Flemish phlegm. A woman in blue and gray, with yellow *sabots*, stood watching on a fallen mast. Then others began to arrive, and as the flames rose higher some slight interest arose with them. The gray woman turned and ran for the *pompiers*. The interest grew and spread among the gathering crowd. Soldiers just landing from the Tête de Flandre caught sight of the crackling flames and rushed towards them. Stevedores left the lading of their steamer, and, leaping across masts and spars, with sacks over their heads and their blue blouses puffed into balloons by the wind, rushed to the scene of action. M—— and I thought it prudent to retire to a street-corner, away from the turmoil.

Such a street! all in warm shade, with rich reds and grays and browns among its high-roofed houses. Out of the Fish-Market close by poured a motley crowd—men in blue jerseys, men in red jerkins, men in shirt-sleeves, little lads in

sailor-clothes with bright yellow *sabots*, women with yellow *sabots* and blue stockings, or yellow stockings and black *sabots*, or black shoes and pink stockings, women in three-cornered shawls, women in long black cloaks. The tardily-awakened interest had grown into intense excitement. Every one ran—soldiers, ladies, porters, priests; and as we left the Quai Vandyck to go home, and looked up at the stone lace-work of the cathedral tower against the bright blue sky, the *pompiers* raced past us with their little hand-engine, to find that the fire had burnt itself out.

Too tired by our long day to walk any more, but unwilling to waste the evening in our rooms, we chartered a comfortable little carriage and drove down to the Port just after sunset. The cathedral tower stood stately and sombre against a pale-pink sky. Against this delicate background, too, we caught fantastic irregular outlines of old houses at every turn of the streets. The busy Quai Vandyck we now saw under a completely changed aspect. The pink of the upper sky melted into yellow, the yellow into a heavy blue-purple blending with the farther shore of the river. The bands of color, intensified by black masts and sails rising from yet blacker hulls lying under the bank, were reflected in the opalescent water; while fluttering pennons on a forest of fishing-boats looked, as M—— said, "like a shoal of minnows."

As we drove along the growing darkness the scene was weird and strange. We caught glimpses of black figures, with heavy burdens on their shoulders, rushing up and down gangways of loading steamers like the demons of some Walpurgisnacht, lighted by oil-cans flaming from their two spouts. Then came a street of ancient houses—we could see only the steps of their gables against the sky—and, instead of a roadway below, the street was full of water and ships, sails half furled, lights, red, green, and yellow, repeating themselves in long reflections amid the black boats on the smooth surface of the canal. Across the river steamer-lights crept to and fro. Low carts, with huge horses that brought to mind Paul Potter's etching of "The

Friesland Horse,'' grazed past us. Then came a black mass —the house of the Hanseatic League. Then great docks like the sea, stretching away infinitely into the darkness, a mysterious confusion of masts, spars, cordage, chimneys, lights, water, black hulls. On shore a tangle of carts and trolleys standing horseless, barrels, cotton-bales, wool-sacks. A locomotive snorted past us in dangerous proximity, appearing one knew not from whence, disappearing again into the gloom. Electric lights flashed on ahead far up the line. We passed more huge warehouses, more canals, more narrow streets. Then the Port and its strange life, its flaming oil-cans, its murky darkness, were left behind, and we found ourselves back in nineteenth-century civilization, driving down the new Frenchified boulevards, with only the statue of David Teniers and the Italian *façade* of Rubens' house to remind us where we were.

EUROPE

St. Petersburg

By SAMUEL S. COX

OUR steamer glides on what becomes a summer sea of smoothness. The few passengers begin to appear on deck and stretch their vision for the first glance at the imperial city. Upon the right, snug amidst its royal greenery, lies the town of Peterhoff and its domes, minarets, and imperial palace, with its splendid woods and waters. Our time is opportune for a glorious sight, for it is sunset, and the sun goes down here at a discreet hour. Bright dots of burnished gold begin faintly to spangle the sky in front. They are domes, half hidden by the mist and the distance. Then a tall spire, also gilded, brilliant and needle-like, pierces the heavens! It is the Admiralty spire, or perhaps that of the Church of the Fortress, the Westminster of Russia, the mausoleum of its dead kings. A few minutes, and St. Isaac's Church, the St. Peter's of Russia, looms up in majestic and stupendous proportions. Its copper dome is surrounded by four others, all ablaze, like burnished gold, and surmounted by the gilded Greek cross which towers aloft, above the bronze saints and angels which people its architraves and its corners, its roofs and its pillared granite cupola! Beneath it is a city whose roofs of varied hue cover almost a million of people; a city the outgrowth from a swamp in less than two hundred years.

We enter the Neva, whose divided waters flow in canals and lagoons between grand pavements and superb palaces.

At length we are moored—alas! how soon the beatific vision vanishes!—amidst the traffic and troubles of trade. We are to undergo a search, the first yet made with rigor since our journey began. Nor can I complain of this rigor. Recent events make police regulations here necessarily stringent. But was it not a little humorous to see the long-robed customs' officers scrutinize the heterogeneous matters in our trunks? Nothing was found contraband but—what think you?—New York journals!

We had received a mail at Stockholm, and expected to read up fully in St. Petersburg. Some dozen of these journals lay in a pile in my wife's trunk. It would have done you good to see the leonine voracity with which these papers were seized. Who was it that talked of the thousand tongues of the press, clearer far than the silver trumpet of the jubilee—louder than the voice of the herald at the games? These tongues had not a word of protest; the music of their trumpet was frozen like that of the veracious traveler. Out of the bundle tumbled an engraving of Charles XII., the old enemy of Russia! Did I tremble for the ominous specter of this dead madcap of Sweden? The courteous officer handed it back with a gracious smile to my wife, who reached for the rest of the bundle, while her face flushed at the indignity to and the confusion of her domestic arrangements. But, with a hasty push and an impetuous "Niebt! Niebt!" (No! no!) our papers were confiscated to the state. The "Sun" would not go down in this land; the "Tribune" was a voiceless oracle; the "World" ceased to "move after all"; the "Times" were out of joint, and the "Express" came to a dead halt! But all this had its compensations; for soon we cross the great bridge, and are housed in the Hôtel d'Angleterre, where though no papers were found in our expected mail, plenty of news as to the President, and the land we love, were found in letters, and these twelve days only from New York.

There shine into my windows, in dazzling glitter, the copper domes of that marvel of cathedrals, St. Isaac's, which we saw from afar, upon whose sides and pedestals, encamp-

ing night and day about us, are the angels of this edifice of beauty! The guns of the citadel thunder out the memory of this, the birthday of the Empress of this vast empire; and, in spite of all ominous auguries to the contrary, we sojourn in peace and safety in this city of beauty and bazaars, palaces and pigeons, monuments and minarets, domes and deviltry, ceremonies and cemeteries, armies and assassinations!

Why does everybody, except the Russians, call this city St. Petersburg? It was not named after St. Peter, but Peter the Great. It is a magnificent city of palaces and wide avenues. Its very hospitals and barracks are palatial, and there is no narrowness to any thoroughfare. Its domes, where not painted blue with golden stars, or green, are gilded, and make the city seem like a Constantinople new-risen upon the North. In fact, with its canals and rivers, its streets, columns and palaces, its churches, and their outside and inside decorations, St. Petersburg combines in itself and in its vistas, in its plan and its magnificence, Venice, Amsterdam, Paris, and Constantinople. If it were not stucco on the yellow houses, if it were only solid stone, how much more impressive would be its mighty and superb aspect! Only one palace is of granite, and but one church, St. Isaac's, of marble.

The energy which has reared such a city out of a bog in less than two centuries betokens the one-man energy which its founder inspired and illustrated. Still, St. Petersburg, as a look from an elevation will show, unless it be approached as we approached it, by the gulf and river, is a vast plain, if not a swamp. The Neva saves it. It is a splendid river, and makes its delta where the city stands. It is a city of islands, connected by beautiful bridges. Red granite faces the banks and makes the quays solid structures. Everything is colossal like the empire. The informing genius of the male gender is Peter the Great, and of the other gender Catherine II. If these sovereigns were insane and they were very peculiar for Russia, more insanity is desirable among the princes of the earth. Peter opened this city, as he said, for a window for Russia to look out of into

civilized Europe. Peter was a useful emperor for Russia and his time, although he did many diabolical things. . . .

The Russian humor is like that of Byron, which Edgar Poe said was too savage to be laughed at. Some one calls it grotesque savagery, and illustrates it by the freaks of Russian princes and czars. John the Terrible thought there was no church like that of St. Basil, and put out the architect's eyes to end any future work of that gifted artist. Peter the Great proposed to hang the lawyers in his realm. He thought one was too much. There is a story of the Empress Annie, who married off her favorite dwarf or fool in an ice palace and gave them an icy marriage-bed, where they froze to death. This I have seen pictured in fine color and delineation. It was a Russian pleasantry. Catherine II. slaughtered many of the men whom she did not love—out of a vagary of fun. Most of the people here hold their revels in grave-yards. Peter stuffed the skin of one of his favorite servants—a tall fellow—and put him in a museum. Paul issued a ukase against shoe-strings and round hats. He was fond of colors, and had fantastic hues painted on bridges and gates. It is hardly mirthful to make an eagle out of gun-flints and swords, or portray a group in heaven of Russians looking down on Jews, Germans, and negroes. But this is Muscovite merriment. In the Moscow markets the slaughtered animals are stuffed with sawdust and look odd. It is said of the Emperor Paul that he dug up the bones of those who murdered his father to pulverize them and blow them to the winds. He arrested an Englishman for not taking off his hat to royalty, and ordered him to wear magnifying-glasses. This was jolly but not exceptional, for the Russian is not adept in making genial fun. The climate is not genial.

The drosky is an odd-looking fleet sort of cab, which barely seats two. It is near the ground, and if it upsets, it is safer than when it is going. Its speed over the bowlders is immense. Its driver is good, and good-humored. The carts, wagons, drays, as well as droskies, have a peculiar harness for the horse. The eminent characteristic of the

establishment is a sort of harness or yoke, about four or five feet above the animal's shoulders. This is not peculiar to Russia, but it is here developed in a higher degree. It rests on the shafts, and somehow, as I believe (*loquor non inexpertus*), the horse has freer motion and an easier draught under this yoke. It does not strain him about the vitalities like our harness. He seems to run loosely as under a canopy of green, though many of the yokes are thus painted with emblems and owners' names on them.

While watching a caravan of these yokes which do not oppress, I had occasion to look through a long line of them, fifty in number, carrying the rye-flour in sacks across the city, and discovered another peculiarity. There is a stout rope from the horse's shoulders to the front axle, which extends some two feet out of the hub to hold these extra traces. The strain seemed to be upon these traces as much as upon the shafts; and just as I was driving in a hurried way—for our driver was dashing at the usual pace—one of our wheels came off and rolled a rod, and down we were! Thanks to the good gray team and some promptitude, we escaped harm; while sympathies all about from the gathered crowd showed that there was much kindness upon the street. . . .

What sights to our unaccustomed eyes are on every side as we drive! Little Tartar children dressed in green; the soldiers with heavy coats and long spears, from the tribes of the Don, the Cossack of history; hussars of red, gay uniform; Caucasian soldiers, with dresses as gay as the Spahis of Algiers—with the various large-breeched natives, in top-boots, or with red shirts only covered by a dark vest—add to the spectacle.

The avenues are wide, and lined with high yellow buildings, palaces, and government edifices, all proportionate to the immense empire of the two continents. The signs look quaint with their peculiar lettering, and the houses, which rarely have doors in front, are unusual in their aspect. The sheet-iron roofs painted green and red; the police in their green uniform and sword; the rivers and canals, full of

strange craft darting about in active business, some from far inland, laden with grain, and some bearing passengers over the Neva and under its bridges—all these odd pictures contribute to keep us on the alert. We drive along the Neva, whose splendid avenues and quays are one. They are lined by the same yellow buildings, where the families of the royal house reside. Then we cross the Neva on a pontoon bridge, called the Troutsen, from which a splendid view is had of the spreading waters of the river—bounded at one end by the elegant edifice of the Commercial Exchange. In winter the river is used for races upon the ice.

Then we turn into Alexandria Park, and admire the villas of the merchant princes upon the lagoons into which the Neva is divided. From the rounding point we perceive the Finland Gulf, Cronstadt, and Peterhoff, and all the points which we passed on our route hither. Then we turn into the Zoological Gardens, where white bears and young cubs, wolves, and walruses, along with thousands of pleasure-seekers, together enjoy the brilliant mimic scenes till midnight. There we found (for fifteen cents only) a splendid theater, out-doors, and famous dogs and monkeys performing, followed by a ballet in pantomime, in which Greeks and Turks play parts, and in which the heroes and heroines of the former are lifted through a gorgeous display of many-colored lights into clouds of glory, amidst the cheers of the populace, which never forgets that Turkey is its natural foe, and that Constantinople is its natural if not national capital. . . .

Upon our drive we notice some fine triumphal arches—copied after the classic models and those of other countries—and other monuments, but none equals the superb Alexander column, erected in 1832. It is a solid shaft of red granite, the greatest monolith of the world. It is based on an enormous block of red granite. There is an angel on the summit. The monument is one hundred and fifty-four feet high, and has a noble and inspiring grace and grandeur. Other statues to Peter and Catherine, besides statues to soldiers and poets, make every square of this grand city

monumental. There is also an equestrian statue of Nicholas. The horse is like that of General Jackson's in Lafayette Square, Washington, and stands upon his hind legs only. It is so much more elegantly and gracefully posed that I could not but compare it to the disadvantage of our own favorite charger.

On no day have we failed to find something about Peter the Great! In "the summer gardens" there is an old palace, where are sacred relics of his handiwork, such as chairs, cabinets, and Chinese designs. The kitchen and bath-room have tiles of the old Dutch style, which he greatly affected. The chimney is as huge as the room. Within is a prison, where he is said to have kept his personal enemies, without benefit of habeas corpus or clergy. It looks gloomy, and the grating seems to be peculiarly adapted to a jail; but it is not very likely that Peter would have enjoyed such society in his own favorite home. . . .

The drives in the parks are beautiful. Therein is a lovely palace where lived the Princess Dagmar before she became empress. The armory here forms a museum of wonderful interest, for it has gifts of untold value from Spain to Persia and beyond. Every kind of gun, sword, and dagger is here, and those from the conquered sheiks and khans of Asia shine resplendent in jewels by the mass. The saddle-cloths from the Orient, and especially the presents from the Shah of Persia, are the richest known to any collection in the world. Among the manifold things here to be seen are the lock and key found near the site of the temple of Jerusalem; the jewelry of the harem of the Khan of Khiva—a wonderful collection for female adornment; Chevalier Bayard's cuirass; a spear which opens after it enters the body; an alarm clock which shoots off a gun to awaken the sleeper; the flags taken in the Hungarian insurrection of 1849; the baton of Schamyl, the Circassian chief, who fought Russia so many years; the emeralds, by the quantity, which the Shah of Persia sent to the Czar; the "horse furniture" of the Indian sheiks, and a circular knife which they used to hurl, which cut your head off before you could say your

little prayer; and as a proper apex to this collection of curious gifts and gems, worth alone sixty millions of rubles, the sword of Mazeppa, the brave hetman of the Poles, who will never cease to ride through histrionic and historic dangers on that fierce untamed charger of the desert! . . .

If you would find in full perfection the richest in all respects of all the palaces in the world, I suppose the Winter Palace would be that superlative edifice. Since the attempt to blow it up as the royal people were about to dine it has been closed. I made an effort, through Colonel Hoffman, our chargé d'affaires, to obtain an entrance for the Americans now stopping here, but vainly. Recent events forbade. The Czar himself will not go into it again. It is shut for two years. This was a disappointment, but it was partly compensated for by admission to the "Hermitage," which is a part or a neighbor to the Winter Palace. But the Hermitage seems to be enough for all our time.

All the "masters," old and young, native and foreign, are in profusion here, as well as specimens of the exhaustless mineral glories of Russia and Siberia in every form of carved beauty and tasteful grace. Museums of ancient statuary, coins, jewels, and intaglios, illustrating every age and phase of history, and, as a climax of interest, the relics of the city of Kertch and other palaces in the Greek colonies of two thousand years ago—now in southern Russia—are here. This exhibition supplements General Cesnola's Cyprian antiquities, and would add fresh interest to our home museum. Upon these Greek relics are found such dresses, worn by the ancient Scythians, as our drosky-drivers now wear, and bas-reliefs on these old vases show horses managed exactly as my former Ohio constituent, Rarey, used to quell the worst "Cruisers" of the equestrian world.

But, as a small American boy remarked at the end of our six hours' promenade through these corridors, "We feel two thousand years old ourselves, we have traveled so much and so far."

Do you ask, is Peter the Great to be found at the Hermitage? Surely, he is everywhere. Here are his lathes,

tools, and knives, and *plaques*, or disks of copper and ivory, cut by his own hand. Here, too, is his measuring-staff, which was a foot taller than any one in our party, and that of his valet, a foot taller than Peter! How could he be such a warrior, statesman, mechanic, and architect, ruling such an immense and incongruous people so well, and make so many knickknacks with his own hand and out of his own mechanical contrivance? This conundrum puzzles the brain. We are curious to know the secret of Peter's power, and of the glamour of grandeur around this giant of Muscovite history and modern civilization. . . .

The staircase of this palace of the Hermitage has no equal in its size and proportion. Outside, there are immense black colossal porphyry figures, bearing up the portico, each an Atlas itself. They are emblems of the eighty millions of subjects, which from every rank uphold this extended empire. With its sixty millions of farmers, now free; its seven millions of villagers, its one million of gentry, nobles, and officers, and its four millions of military men and their families, it would seem that the vast edifice of the Russian power would be stable, supported by such Atlantean shoulders. Is it really so? Time will tell. For the welfare of all it is to be wished that there was more comfort and elevation among these vast masses of men.

ASIA

A Mecca Pilgrim in Disguise

By RICHARD F. BURTON

IN the autumn of 1852, I offered my services to the Royal Geographical Society of London, for the purpose of removing that opprobrium to modern adventure, the huge white blot which in our map denotes the eastern and central regions of Arabia.

On the evening of April 3, 1853, I left London and upon reaching Suez about three months later left there for Djidda, the port of Mecca. Immense was the confusion on the eventful day of our departure. Suppose us standing on the beach on the morning of a fiery July day, carefully watching our hurriedly-packed goods and chattels, surrounded by a mob of idlers who are not too proud to pick up waifs and strays, while pilgrims rush about apparently mad, and friends are weeping, acquaintances vociferating adieus, boatmen demanding fees, shopmen claiming debts, women shrieking and talking with inconceivable power, children crying—in short, for an hour or so we were in the thick of a human storm. To confound confusion, the boatmen have moored their skiff half a dozen yards away from the shore, lest the porters should be unable to make more than double their fare from the pilgrims.

When on the water the pilgrims offer this prayer: "O Allah, O Exalted, O Almighty, O All-pitiful, O All-powerful, thou art my God, and sufficeth to me the knowledge of it! Glorified be the Lord my Lord, and glorified be the

faith my faith! Thou givest victory to whom thou pleasest, and thou art the glorious, the merciful! We pray thee for safety in our goings-forth and in our standings-still, in our words and our designs, in our dangers of temptation and doubts, and the secret designs of our hearts. Subject unto us this sea, even as thou didst subject the deep to Moses, and as thou didst subject the fire to Abraham, and as thou didst subject the iron to David, and as thou didst subject the wind, and the devils, and genii, and mankind to Solomon, and as thou didst subject the moon and El-Burak to Mohammed, upon whom be Allah's mercy and His blessing! And subject unto us all the seas in earth and heaven, in the visible and in thine invisible worlds, the sea of this life, and the sea of futurity. O thou who reignest over everything, and unto whom all things return, Khyar! Khyar!"

We traveled through a country fantastic in its desolation —a mass of huge hills, barren plains, and desert vales. Even the sturdy acacias here failed, and in some places the camel-grass could not find earth enough to take root in. The road wound among mountains, rocks, and hills of granite, over broken ground, flanked by huge blocks and bowlders, piled up as if man's art had aided nature to disfigure herself. Vast clefts seemed like scars on the hideous face of earth; here they widened into dark caves, there they were choked up with glistening drift sand. Not a bird or a beast was to be seen or heard; their presence would have argued the vicinity of water, and though my companions opined that Bedouins were lurking among the rocks, I decided that these Bedouins were the creatures of their fears. Above, a sky like polished blue steel, with a tremendous blaze of yellow light, glared upon us, without the thinnest veil of mist or cloud. The distant prospect, indeed, was more attractive than the near view, because it borrowed a bright azure tinge from the intervening atmosphere; but the jagged peaks and the perpendicular streaks of shadow down the flanks of the mountainous background showed that no change for the better was yet in store for us.

We traveled that night up a dry river-course in an east-

erly direction, and at early dawn found ourselves in an ill-famed gorge, called *Shuab el-Hadj* (the "Pilgrim's Pass"). The loudest talkers became silent as we neared it, and their countenances showed apprehension written in legible characters. Presently, from the high, precipitous cliff on our left, thin blue curls of smoke—somehow or other they caught every eye—rose in the air, and instantly afterwards rang the loud, sharp cracks of the hill-men's matchlocks, echoed by the rocks on the right. My *shugduf* had been broken by the camel's falling during the night, so I called out to Mansúr that we had better splice the frame-work with a bit of rope; he looked up, saw me laughing, and with an ejaculation of disgust disappeared. A number of Bedouins were to be seen swarming like hornets over the crests of the rocks, boys as well as men carrying huge weapons, and climbing with the agility of cats. They took up comfortable places in the cut-throat eminence, and began firing upon us with perfect convenience to themselves.

The height of the hills and the glare of the rising sun prevented my seeing objects very distinctly, but my companions pointed out to me places where the rock had been scarped and a kind of breastwork of rough stones—the Sangah of Afghanistan—piled up as a defense, and a rest for the long barrel of the matchlock. It was useless to challenge the Bedouins to come down and fight us upon the plain like men; and it was equally unprofitable for our escort to fire upon a foe ensconced behind stones. We had, therefore, nothing to do but to blaze away as much powder and to veil ourselves in as much smoke as possible; the result of the affair was that we lost twelve men, besides camels and other beasts of burden. Though the bandits showed no symptoms of bravery, and confined themselves to slaughtering the enemy from their hill-top, my companions seemed to consider this questionable affair a most gallant exploit.

Half an hour after leaving the Wady el-Akik, or "Blessed Valley," we came to a huge flight of steps, roughly cut in a long, broad line of black, scoriaceous

basalt. This is called the *Mudarraj*, or flight of steps over the western ridge of the so-called El-Harratain; it is holy ground, for the Prophet spoke well of it. Arrived at the top, we passed through a lane of black scoria, with steep banks on both sides, and, after a few minutes, a full view of the city suddenly opened on us. We halted our beasts as if by word of command. All of us descended, in imitation of the pious of old, and sat down, jaded and hungry as we were, to feast our eyes with a view of the Holy City. The prayer was, "O Allah! this is the *Haram* (sanctuary) of the Prophet; make it to us a protection from hell fire, and a refuge from eternal punishment! O, open the gates of thy mercy, and let us pass through them to the land of joy!"

As we looked eastward, the sun arose out of the horizon of low hills, blurred and dotted with small tufted trees, which gained a giant stature from the morning mists, and the earth was stained with gold and purple. Before us lay a spacious plain, bounded in front by the undulating ground of Nedjed; on the left was a grim barrier of rocks, the celebrated Mount Ohod, with a clump of verdure and a white dome or two nestling at its base. Rightward, broad streaks of lilac-colored mists were thick with gathered dew, there pierced and thinned by the morning rays, stretched over the date-groves and the gardens of Kuba, which stood out in emerald-green from the dull tawny surface of the plain. Below, at the distance of about two miles, lay El Medina; at first sight it appeared a large place, but a closer inspection proved the impression to be an erroneous one.

Passing through muddy streets—they had been freshly watered before evening-time—I came suddenly upon the Prophet's mosque. Like that at Mecca, the approach is choked up by ignoble buildings, some actually touching the holy *enceinte*, others separated by a lane compared with which the road around St. Paul's is a Vatican square. There is no outer front, no general aspect of the Prophet's mosque; consequently, as a building it has neither beauty nor dignity. And entering the Bab el-Rahmah—the Gate of Pity—by a diminutive flight of steps, I was astonished at

the mean and tawdry appearance of a place so universally venerated in the Moslem world. 'It is not like the Meccan mosque, grand and simple, the expression of a single sublime idea; the longer I looked at it the more it suggested the resemblance of a museum of second-rate art, a curiosity-shop, full of ornaments that are not accessories, and decorated with pauper splendor.

Our days in Medina were spent thus: At dawn we arose, washed, prayed, and broke our fast upon a crust of stale bread, before smoking a pipe and drinking a cup of coffee. Then it was time to dress, to mount, and to visit the Haram in one of the holy places outside the city. Returning before the sun became intolerable, we sat together, and with conversation, shishas and chibouques, coffee and cold water perfumed with mastich-smoke, we whiled away the time till our *ariston*, an early dinner which appeared at the primitive hour of eleven A.M. The meal was served in the *majlis* on a large copper tray, sent from the upper apartments. Ejaculating "Bismillah"—the Moslem grace—we all sat around it, and dipped equal hands in the dishes set before us. We had usually unleavened bread, different kinds of meat and vegetable stews, and at the end of the first course plain boiled rice, eaten with spoons; then came the fruits, fresh dates, grapes, and pomegranates.

After dinner I used invariably to find some excuse—such as the habit of a "Kaylúlah" (midday siesta), or the being a "Saudawi" or person of melancholy temperament—to have a rug spread in the dark passage, and there to lie reading, dozing, smoking, or writing, all through the worst part of the day, from noon to sunset. Then came the hour for receiving and paying visits. The evening prayers ensued, either at home or in the Haram, followed by our supper, another substantial meal like the dinner, but more plentiful of bread, meat, vegetables, rice, and fruits. In the evening we sometimes dressed in common clothes and went to the café; sometimes, on festive occasions, we indulged in a late supper of sweetmeats, pomegranates, and dried fruits. Usually we sat upon mattresses spread upon the ground in

the open air at the Sheka's door, receiving evening visits, chatting, telling stories, and making merry, till each, as he felt the approach of the drowsy god, sank down into his proper place and fell asleep.

My companions and I joined the caravan from Damascus. The day's march was peculiarly Arabian. It was a desert peopled only with echoes—a place of death for what little there is to die in it—a wilderness, where, to use my companion's phrase, there is nothing but He (Allah). Nature, scalped, flayed, discovered her anatomy to the gazer's eye. The horizon was a sea of mirage; gigantic sand-columns whirled over the plain; and on both sides of our road were huge piles of bare rock, standing detached upon the surface of sand and clay. Here they appeared in oval lumps, heaped up with a semblance of symmetry; there a single bowlder stood, with its narrow foundation based upon a pedestal of low, dome-shaped rock. All are of a pink coarse-grained granite, which flakes off in large crusts under the influence of the atmosphere. . . .

On the morning of Sunday, September 11, 1853, about one A.M., I was aroused by general excitement "Mecca! Mecca!" cried some voices. I looked out from my litter. There at last it lay, the bourne of my long and weary pilgrimage, realizing the plans and hopes of many and many a year. The mirage medium of fancy invested the huge catafalque and its gloomy pall with peculiar charms. There were no giant fragments of hoar antiquity as in Egypt, no remains of graceful and harmonious beauty as in Greece and Italy, no barbaric gorgeousness as in the buildings of India; yet the view was strange, unique, and how few have looked upon the celebrated shrine! I may truly say that, of all the worshipers who clung weeping to the curtain, or who pressed their beating hearts to the stone, none felt for the moment a deeper emotion than did the Hadji from the far north. It was as if the poetical legends of the Arab spoke truth, and that the waving wings of angels, not the sweet breeze of morning, were agitating and swelling the black covering of the shrine. But, to confess humbling truth, theirs was the

high feeling of religious enthusiasm, mine was the ecstasy of gratified pride.

For a long time I stood looking in despair at the swarming crowd of Bedouin and other pilgrims that besieged the Black Stone. Our boy Mohammed was equal to the occasion. During our circuit he had displayed a fiery zeal against heresy and schism, by foully abusing every Persian in his path; and the inopportune introduction of hard words into his prayers made the latter a strange patchwork. He might, for instance, be repeating "and I take refuge with thee from ignominy in this world," when, "O thou rejected one, son of the rejected!" would be the interpolation addressed to some long-bearded Khorasani—"and in that to come—O hog and brother of a hoggess!" And so he continued till I wondered that no one dared to turn and rend him.

After vainly addressing the pilgrims, of whom nothing could be seen but a mosaic of occiputs and shoulder-blades, the boy Mohammed collected about half a dozen stalwart Meccans, with whose assistance, by sheer strength, we wedged our way into the thin and light-legged crowd. The Bedouins turned round upon us like wild cats, but they had no daggers. The season being autumn, they had not swelled themselves with milk for six months; and they had become such living mummies that I could have managed single-handed half a dozen of them. After thus reaching the stone, despite popular indignation, testified by impatient shouts, we monopolized the use of it for at least ten minutes. Whilst kissing it and rubbing hands and forehead upon it I narrowly observed it, and came away persuaded that it is a big aërolite. On September 12th, we mounted the litter and set out for Arafat, "the Mount of Wrestling in Prayer."

Arafat is about a six hours' march, or twelve miles, on the Taif road, due east of Mecca. We arrived there in a shorter time, but our weary camels, during the last third of the way, frequently threw themselves upon the ground. Human beings suffered more. Between Muna and Arafat I saw no less than five men fall down and die upon the high-

way; exhausted and moribund, they had dragged themselves out to give up the ghost where it departs to instant beatitude. The spectacle showed how easy it is to die in these latitudes; each man suddenly staggered, fell as if shot, and, after a brief convulsion, lay still as marble. The corpses were carefully taken up, and carelessly buried that same evening, in a vacant space among the crowds encamped upon the Arafat plain.

Nothing can be more picturesque than the view the mountain affords of the blue peaks behind, and the vast encampment scattered over the barren yellow plain below. On the north lay the regularly pitched camp of the guards that defend the unarmed pilgrims. To the eastward was the Scherif's encampment with the bright mahmals and the gilt knobs of the grander pavilions; whilst, on the southern and western sides, the tents of the vulgar crowded the ground, disposed in dowars, or circles, for penning cattle. After many calculations, I estimated the number to be not less than 50,000 of all ages and sexes. . . .

The ceremony of Ramy, or "stoning the Great Devil," is a curious sight. The "Shaytan el-Kabir" is a stone pillar backed by a wall.

As the ceremony must be performed on the first day by all pilgrims between sunrise and sunset, and as the fiend was malicious enough to appear in a rugged pass, the crowd makes the place dangerous. On one side of the road, which is not forty feet broad, stood a row of shops belonging principally to barbers. On the other side is the rugged wall of the pillar, with a *chevaux-de-frise* of Bedouins and naked boys. The narrow space was crowded with pilgrims, all struggling like drowning men to approach as near as possible to the Devil; it would have been easy to run over the heads of the mass. Among them were horsemen with rearing chargers. Bedouins on wild camels, and grandees on mules and asses, with outrunners, were breaking a way by assault and battery.

I had read Ali Bey's self-felicitations upon escaping this place with "only two wounds in the left leg," and had duly

provided myself with a hidden dagger. The precaution was not useless. Scarcely had my donkey entered the crowd than he was overthrown by a dromedary, and I found myself under the stamping and roaring beast's stomach. By a judicious use of the knife I avoided being trampled upon, and lost no time in escaping from a place so ignobly dangerous. Finding an opening at last, we approached within about five cubits of the place, and holding each stone between the thumb and forefinger of the ring-hand, cast it at the pillar, exclaiming, "In the name of Allah, and Allah is Almighty, I do this in hatred of the Fiend and to his shame."

The seven stones being duly thrown, we retired, and entering the barber's booth, took our places upon one of the earthen benches around it. This was the time to remove the *ihram*, or pilgrim's garb, and to return to *ihlal*, the normal state of El Islam. The barber shaved our heads, and, after trimming our beards and cutting our nails, made us repeat these words: "I purpose loosening my ihram according to the practice of the Prophet, whom may Allah bless and preserve! O Allah, make unto me in every hair, a light, a purity, and a generous reward! In the name of Allah, and Allah is Almighty!" At the conclusion of his labor the barber politely addressed to us a "Naiman," —Pleasure to you! To which we as ceremoniously replied, "Allah give thee pleasure!"

Later, upon returning to the city from the sacrifice of sheep in the valley of Muna, we bathed, and when noon drew nigh we repaired to the Haram for the purpose of hearing the sermon. Descending to the cloisters below the Bab el-Ziyadah, I stood wonderstruck by the scene before me. The vast quadrangle was crowded with worshipers sitting in long rows, and everywhere facing the central black tower; the showy colors of their dresses were not to be surpassed by a garden of the most brilliant flowers, and such diversity of detail would probably not be seen massed together in any other building upon earth. The women, a dull and somber-looking group, sat apart in their peculiar place. The Pasha

stood on the roof of Zem Zem, surrounded by guards in Nizam uniform. Where the principal ulema stationed themselves the crowd was thicker; and in the more auspicious spots naught was to be seen but a pavement of heads and shoulders.

Nothing seemed to move but a few dervishes, who, censer in hand, sidled through the rows and received the unsolicited alms of the faithful. Apparently in the midst, and raised above the crowd by the tall, pointed pulpit, whose gilt spire flamed in the sun, sat the preacher, an old man with snowy beard. The style of head-dress called *taylasan* covered his turban, which was white as his robes, and a short staff supported his left hand.

Presently he arose, took the staff in his right hand, pronounced a few inaudible words, and sat down again on one of the lower steps, whilst a Muezzin, at the foot of the pulpit, recited the call to sermon. Then the old man stood up and began to preach. As the majestic figure began to exert itself there was a deep silence. Presently a general "Amin" was intoned by the crowd at the conclusion of some long sentence. And at last, towards the end of the sermon, every third or fourth word was followed by the simultaneous rise and fall of thousands of voices.

I have seen the religious ceremonies of many lands, but never—nowhere—aught so solemn, so impressive, as this spectacle.

ASIA

The Holy City

By ELIOT WARBURTON

THE road from Jaffa has been for 4000 years the highway between Jerusalem and the western plains that border on the sea, and its slippery rocks are so round and smooth as to render firm footing difficult. Chariots never could have been used here, and it would be impossible for cavalry to act, or even to advance against a hostile force. The scenery resembled that of the wildest glens of Scotland, only that here the gray crags were thickly tufted with aromatic shrubs, and instead of the pine, the sycamore, the olive, and the palm shaded the mountain's side.

We passed by the village of Jeremiah and the "Terebinthine Vale." In the last we recognize the scene of David's combat with Goliath, and its little brook still sparkles here as freshly as when he picked thence pebbles to smite the Philistine. Generally speaking, the river-beds were as dry as the path we trod, and this was the only stream but one that I saw between Jaffa and the Jordan. A large caravan was assembled on its banks, with all its picturesque variety of laden camels, mules with gay trappings, mountain cavaliers with turban and embroidered vests, veiled women on donkeys, half-naked Arabs with long spears, dwellers in cities with dark kaftan or furred pelisse. All, however various their nation, profession, or appearance, were eagerly quaffing the precious stream or waiting

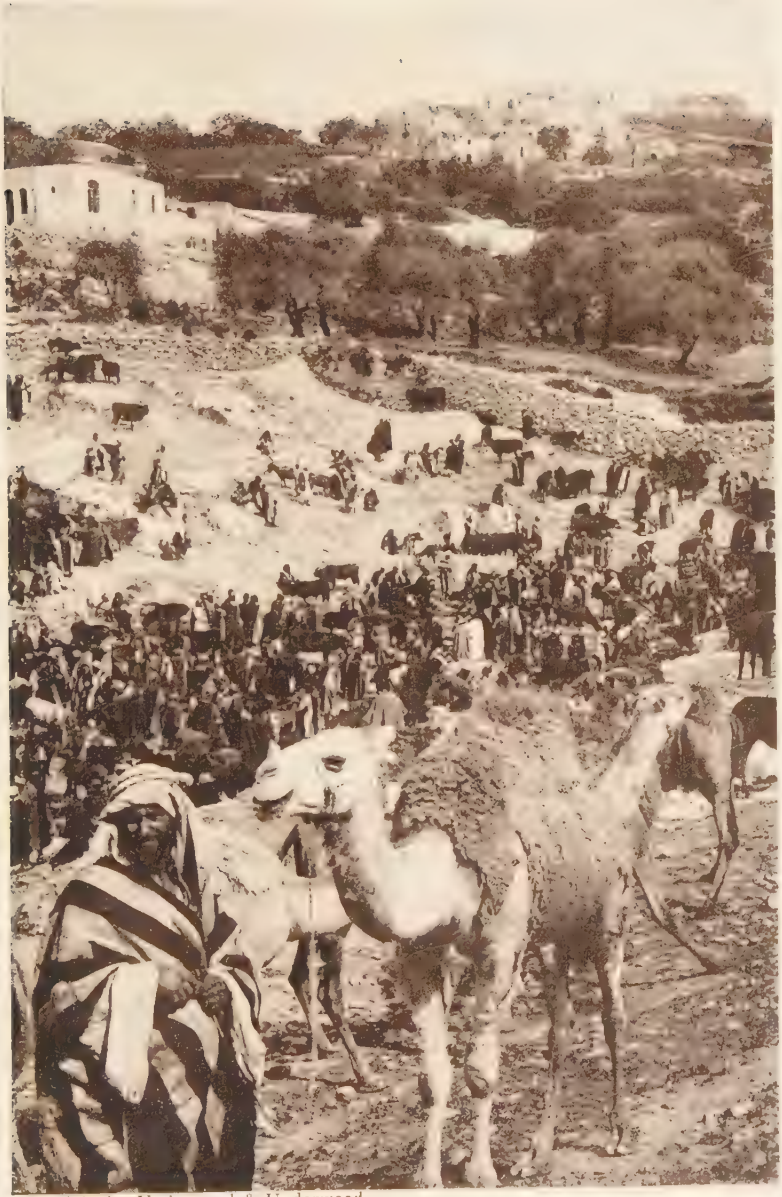
under "the shadow of a high rock" for the caravan to proceed.

The hills became more and more precipitous as we approached Jerusalem; most of them were of a conical form, and terraced to their summit. Yet on these steep acclivities the strenuous labor of the Israelite had formerly grown corn, wine, and oil; and, on the terraces that remained uninjured the few present inhabitants still plant wheat and vineyards and olive-groves. There was no appearance of water, except the inference that might be drawn of wells within the few villages that hung on the mountain's side.

The pathway continued as rough as ever, while we wound through the rocky defiles leading to the upper plains; but it was much more frequented, and I had joined a large and various company for the sake of listening to their talk about the city that now absorbed every other interest. At each acclivity we surmounted we were told that the next would reveal to us the object of our destination; and at length, as we emerged upon a wide and sterile plain, the leading pilgrims sank upon their knees, the most contagious shout of enthusiasm I ever heard burst from each traveler, and every man of that large company—Arab, Italian, Greek, and Englishman—exclaimed, each in his own tongue, "El Khuds!" "Gerusalemma!" "Higiopolis!" "The Holy City!"

It was, indeed, Jerusalem, and had the Holy City risen before us in its palmiest days of magnificence and glory, it could not have created deeper emotion, or been gazed at more earnestly and with intenser interest. . . .

Apart from all associations, the first view of Jerusalem is a most striking one. A brilliant and uncheckered sunshine has something mournful in it when all that it shines upon is utterly desolate and drear. Not a tree or green spot is visible, no sign of life breaks the solemn silence; no smile of nature's gladness ever varies the stern scenery around. The flaming, monotonous sunhine above, and the pale, distorted, rocky wastes beneath realize but too faithfully the prophetic picture, "Thy sky shall be brass and thy land



Copyright by Underwood & Underwood.

SCENE IN THE HOLY LAND.

shall be iron." To the right and left, as far as the eye can reach, vague undulations of colorless rocks extend to the horizon. A broken and desolate plain in front is bounded by a wavy, battlemented wall, over which towers frown, and minarets peer, and mosque domes swell, intermingled with church turrets and an indistinguishable mass of terraced roofs. High over the city, to the left, rises the Mount of Olives, and the distant hills of Moab, almost mingling with the sky, afford a background to the striking picture. . . .

I had always pictured to myself Jerusalem as standing upon lofty hills and visible from afar. It is, on the contrary, on the edge of the wide platform by which we approached from Jaffa, and is commanded by the Mount of Olives, the Hill of Scopas, and other eminences, from which it is divided by the deep and narrow ravines called the Valley of Jehoshaphat and the Vale of Hinnom. These ravines meet in the form of a Y, the lower part of which describes the precipitous glen through which the brook Kedron flows in winter to the Dead Sea.

The site of the city is in itself unique. Selected originally from the strength of its position only, it offers none of the features usually to be found surrounding the metropolis of a powerful people. No river nor any stream flows by it; no fertility surrounds it; no commerce seems able to approach its walls; no thoroughfare of nations finds it in the way. It seems to stand apart from the world, exempt from its passions, its ambitions, and even its prosperity. Like the high-priest who once ministered in its temple, it stands solitary and removed from all secular influences, and receives only those who come to worship at its mysteries. All the other cities of the earth are frequented by votaries of gain, science, luxury, or glory; Zion offers only privations to the pilgrim's body, solemn reflections for his thoughts, awe for his soul; her palaces are ruins, her hostels are dreary convents, her chief boast and triumph is a Tomb. . . .

The greater part of the time I passed at Jerusalem I was as solitary as in the desert. In the cool of the evening I used to ride up the Mount of Olives, or explore the glens

and caverns, once the refuge places of the Prophets, now the resort of robbers and outlaws. If I had been reconnoitering for Titus I could not have made myself more familiar with every feature of the doomed city than solitude and curiosity conspired to make me during those frequent rambles. Toward noon I was driven by the heat to take shelter in my apartments, which I shall describe, as affording a specimen of the houses of Jerusalem. I passed only one night in the dreary hospice of the Terra Santa, and the next evening found myself, on my return from a distant ride, the tenant of Abou Habib, in the Via Dolorosa.

He was a portly old Christian, very like Lablache in the garb of Figaro, but that a long robe of brown silk enveloped his person, and a capacious turban 'his broad brow. He could speak but few words of Italian, and the gesticulations with which he endeavored to express some difficult emotion in Arabic were irresistibly ludicrous. He piqued himself on his cookery, and was continually inventing some new abomination of grease and rice to tempt my appetite. There was a hospitality about the old fellow, notwithstanding his reputed avaricious propensities, that prevented me from ever scrutinizing his bills. If he made the most of his guests in one respect, he also did it in every other.

My servant was quite superseded in the culinary department. As soon as I rose in the morning it was Abou Habib who presented my coffee; when I came in from riding, pipe and coffee were handed by Abou Habib; and in a few moments rissoles in vine-leaves, or pieces of pilan in cucumbers, with a broiled fowl and a flask of Vino d'Oro, were presented by Abou Habib. If I clapped my hands throughout the day, the same portly figure presented itself; if I fell asleep on the divan, I found him fanning away the flies; at dinner he was at once cook and butler; in the evening he was killing chickens while he whistled a tune, or plucking them as he chanted some unintelligible old song; he even climbed the housetop to offer my pipe, and at length actually took to grooming my horses.

The entrance to this house of hospitality was by a nar-

row flight of stone steps leading out of the Via Dolorosa; a door opened thence into a court-yard, where my horses were stabled in an inclosure and picketed to the wall by the fetlock; a corridor, in which there were doors leading to a kitchen on one side and sleeping-rooms on the other, connected this outer with an inner court, shaded by a few lemon and cypress-trees. In this were my apartments, consisting of a sleeping-room and a large wainscoted chamber, surrounded with a divan and diversified with a variety of shelves, presses, and cupboards. Opposite were the sleeping-apartments of my host, his buxom wife, and her blooming sister. These women seemed to lead a life of perfect idleness, for the indefatigable Abou Habib was all in all, and monopolized all the offices of the establishment, even to dressing, in more senses than one, a young son of his who was the plague of the household.

My host was civil and humble, even to servility; but the female members of his family appeared to be as free from constraint as they were from forwardness. During a short but severe illness they attended me with the greatest kindness, and afterward gave me lessons in Arabic, and folding turbans, and other Eastern acomplishments. . . . It was pleasant, when evening fell, as I lay on the divan and looked upon the clear, bright sky, against which the cypresses trembled in the night breeze, to hear the low, sweet, plaintive voices in which these Eastern women sang the songs of their historic land. Hebron was their native place, and they were Christians, though they had never heard of the Bible, but the name of the Koran was familiar to them.

Their dress in the house consisted of a close-fitting tunic, buttoned from beneath the bosom for some distance down, thence open to allow free motion to their limbs, that were clothed with very full, loose trowsers, tied at the ankle, and falling over the slippered foot. The bosom was generally open, or but partly inclosed by the crape garment within; a light turban or a handkerchief of Damascus silk covered the head, from which the rich hair flowed free, or was plaited

into two long braids. In the streets the Christian women wear the *yashmak*, or veil, across the face, as the Moslems do, but in the house it is entirely laid aside. The women of all religions pass much of their time on the housetops, peeping through the circular tiles that are built into a wall so as to admit the air yet conceal the inhabitants of each roof.

I rode forth to make a circuit of the city, "to walk round about her and mark well her battlements." Sadly has all changed since this proud challenge was spoken, yet the walls are still towering and imposing in their effect. They vary in height from twenty to sixty feet, according to the undulations of the ground, and are everywhere in good repair. The columns and architraves, as old at least as the Roman-conquered city, that are worked into these walls instead of ruder stones, bear eloquent testimony to the different nature of their predecessors. A bridle-path leads close to their base all round; the valleys of Hinnom and Jehoshaphat yawn suddenly beneath them on the west, south, and north, separating them from Mount Gihon, the Hill of Evil Counsel, and the Mount of Olives.

These hills are utterly barren, and lonely as fear can make them. Though within gunshot of the city, robberies are here committed with impunity, and few people venture to leave the walls without being well armed and attended. The deep gloom of the Valley of Hinnom; the sterility of all around; the silence and desolation so intense, yet so close to the city; the sort of memory with which I could trace each almost familiar spot, from the Tower of Hippicus to the Hill of Scopas, made this the most interesting excursion I ever undertook. Now we look down upon the Pool and Valley of Gihon from the summit of Mount Zion; now upon the Vale of Hinnom, with the Pool of Siloam, and Aceldama beyond the brook; now over Mount Moriah, with the Valley of Jehoshaphat beneath, and the village of Siloam on the opposite side, scattered along the banks where Kedron used to flow. Then, passing through the Turkish cemetery and over the brook Kedron, we come to the venerable

garden of Gethsemane, in which, say the legends, still stand the olive-trees that sheltered Christ.

This garden is only a small grove, occupying perhaps two acres of ground, but it is one of the best authenticated scenes of interest about Jerusalem. From it a steep and rocky path leads to the three summits of the Mount of Olives, on the loftiest of which stands the Church of the Ascension. An Armenian priest admitted me into the sacred enclosure, motioned to a little monk to lead about my horse, and led the way in silence to the roof of the church. From hence is the most interesting, if not the most striking, view in the world.

From such a summit might the great leader of the people have viewed the land, which was to be the reward of their desert wanderings. From it is laid bare every fiber of the great heart of Palestine. The atmosphere is like a crystal lens, and every object in the Holy City is as clear as if it lay within a few yards, instead of a mile's distance. Each battlement upon those war-worn walls, each wild flower that clusters over them; the dogs prowling about the waste places among the ruins and cactus and cypress; the turbaned citizen slowly moving in the streets; all these are recognizable almost as clearly as the prominent features of the city.

The eminence called Mount Moriah lies nearest to our view, just above the narrow Valley of Jehoshaphat. The city wall passes over the center of it, embracing a wide enclosure, studded with cypresses and cedars, in the center of which stands the magnificent Mosque of Omar. This is of a very light, fantastic architecture, bristling with points, and little spires and minarets, many of which have gilded crescents that flash and gleam in the sunshine; while the various groups of Moslems, seated on bright carpets, or slowly wandering among the groves, give life and animation to the scene.

The mosque occupies the site of the Temple, and is held holy by the Moslem as the place where Abraham offered Isaac to be a sacrifice. To the left of the mosque enclosure within the walls is a space covered with rubbish and jungles

of the prickly pear; then part of the Hill of Zion, and David's Tower. To the right of the enclosure is the Pool of Bethesda, beyond which St. Stephen's Gate affords entrance to the Via Dolorosa, a steep and winding street, along which Christ bore the Cross in his ascent to Calvary. To the right of the street, and toward the north, stands the hill of Acra, on which Salem, the most ancient part of the city, was built, they say, by Melchisedek. This hill is inclosed by the walls of the modern town; but the hill of Bezetha lies yet farther to the right, and was enclosed within the walls that the Romans stormed. Beyond Bezetha stands the Hill of Scopas, wherefrom Titus gazed upon Jerusalem the day before its destruction, and wept for the sake of the beautiful city. . . .

Beneath us is the Garden of Gethsemane, the Valley of Hinnom with its Tophet, and the Vale of Jehoshaphat with its brook Kedron, which meets the waters of Siloam at the Well of Job. The Tombs of the Kings of Nehemiah, of Absalom, and of the Judges, lie before us; the caves of the Prophets everywhere pierce the rocks, that have so often resounded to the war-cry of the Chaldean, the Roman, the Saracen, and the Crusader. Beyond the city spreads the Vale of Rephaim, with Bethlehem in the distance; every rock and hill and valley that is visible bears some name that has rung in history. And then the utter desolation that everywhere prevails—as if it was all over with that land and the "rocks had indeed fallen, and the hills indeed had covered" the mighty, the beautiful, and the brave, who once dwelt there in prosperity and peace. No flocks, no husbandmen, nor any living thing is there, except a group of timid travelers—turbaned figures, and veiled women, and a file of camels—winding along the precipitous pathway under the shadow of the palm-tree.

Descending from the Mount of Olives, I reëntered the city by St. Stephen's Gate, where Turkish soldiers constantly keep guard; turning to the left, I visited the Pool of Bethesda, and then wandered slowly over the Via Dolorosa, in which is pointed out each spot where the Saviour

fell under the burden of the Cross, as he bore it to Calvary along this steep and rugged way.

In after-days I impatiently traversed the squalid city, with a monk for my guide, in search of its various localities of traditionary sanctity; but I will not ask the reader to stoop to such a labor. My monkish cicerone pointed out to me where Dives lived, where Lazarus lay, where the cock crowed or roosted that warned Peter of his crime, and even where the blessed Virgin used to wash her Son's linen. It is difficult to speak of such things gravely, and yet I would not have one light feeling or expression intermingled with the solemn subjects of which this chapter attempts to treat. . . .

The character of the city within corresponds with that of the country without. Most of it is very solitary and silent; echo only answers to your horse's tread; and frequent waste places, among which the wild dog prowls, convey an indescribable impression of desolation. It is not those waste places alone that give such an air of loneliness to the city, but many of the streets themselves, dark, dull, and mournful-looking, seem as if the Templars' armed tread was the last to which they had resounded. The bazaars and places of business are confined to one small quarter of the city; everywhere else you generally find yourself alone. No one is even there to point out your way; and you come unexpectedly upon the Pool of Bethesda, or wander among the vaulted ruins of the Hospitallers' courts, without knowing it.

The remains of the ancient city that meet your eye are singularly few; here and there a column is let into the wall, or you find that the massive and uneven pavement is of costly marble; but, except the Pools of Hezekiah and Bethesda, the Tower of Hippicus, and some few other remains, preserved on account of their utility, there is little of art to connect the memory with the past.

The chief place of interest in Jerusalem is the Holy Sepulchre, whose site I believe to be as real as the panorama that the priests have gathered around it must needs be

false. You descend by a narrow lane and a flight of steps into a small enclosure, where a guard of Turkish soldiers is stationed to keep peace among the Christians. After paying tribute to this infidel police, you enter into a large circular hall, supported by a colonnade of eighteen pillars, and surrounded by a large dome, in the center of which is a pavilion containing the Holy Sepulchre. The whole of this church has been so frequently described that I shall only mention that within its walls are collected a panorama of all the events that took place at the crucifixion; the place where Christ was scourged; the hole in the rock where the Cross stood; the fissure where the rock was rent in twain; the place where the soldiers cast lots for the garments; the stone whereon the body was anointed; and, lastly, the grave wherein it was laid.

ASIA

The Great Ruins of Bashan

By J. L. PORTER

FROM the first moment of my arrival in Damascus I felt an intense desire to visit the ancient kingdom of Bashan.

The ancient cities, and even the villages, of Western Palestine have been almost annihilated; with the exception of Jerusalem, Hebron, and two or three others, not one stone has been left upon another. In some places we can scarcely discover the spot where a noted city stood, so complete has been the desolation. Even in Jerusalem itself only a very few vestiges of the ancient buildings remain; the Tower of David, portions of the wall of the Temple area, and one or two other fragments—just enough to form the subject of dispute among antiquaries.

The state of Bashan is totally different; it is literally crowded with towns and large villages, and, though the vast majority of them are deserted, they are not ruined. I have more than once entered a deserted city in the evening, taken possession of a comfortable house, and spent the night in peace. Many of the houses in the ancient cities of Bashan are as perfect as if finished only yesterday. The walls are sound, the roofs unbroken, the doors, and even the window-shutters, in their places. Let not my readers think that I am transcribing a passage from the "Arabian Nights." I am relating sober facts; I am simply telling what I have seen, and what I purpose more fully to describe.

"But how," you ask me, "can we account for the pres-

ervation of ordinary dwellings in a land of ruins? If one of our modern English cities were deserted for a millennium there would scarcely be a fragment of a wall standing." The reply is easy enough. The houses of Bashan are not ordinary houses. Their walls are from five to eight feet thick, built of large squared blocks of basalt; the roofs are formed of slabs of the same material, hewn like planks, and reaching from wall to wall; the very doors and window-shutters are of stone, hung upon pivots projecting above and below. Some of these ancient cities have from two to five hundred houses still perfect, but not a man to dwell in them.

On one occasion, from the battlements of the Castle of Salcah, I counted some thirty towns and villages, dotting the surface of the vast plain, many of them almost as perfect as when they were built, and yet for more than five centuries there has not been a single inhabitant in one of them.

On a bright and balmy morning in February we defiled from the East Gate of Damascus, rode for half an hour among the orchards that skirt the old city, and then, turning to the left, struck out, along a broad beaten path through the open fields in a south-easterly direction. The leader was a wild-looking figure. His dress was a red cotton tunic or shirt, fastened round the waist by a broad leathern girdle. Over it was a loose jacket of sheepskin, the wool inside. His feet and legs were bare. On his head was a flame-colored handkerchief, fastened above by a coronet of black camel's-hair, which left the ends and long fringe to flow over his shoulders. He was mounted on an active, shaggy pony, with a pad for a saddle and a hair halter for a bridle. Before him, across the back of his little steed, he carried a long rifle, his only weapon. Immediately behind him, on powerful Arab horses, were three men in Western costume; one of these was the writer. Next came an Arab, who acted as dragoman, or rather courier, and two servants on stout hacks brought up the rear.

On gaining the beaten track our guide struck into a sharp canter. The great city was soon left far behind, and on turning we could see its tall white minarets shooting up

from the somber foliage and thrown into bold relief by the dark background of Anti-Lebanon. The plain spread out on each side, smooth as a lake, covered with the delicate green of the young grain. Here and there were long belts and large clumps of dusky olives, from the midst of which rose the gray towers of a mosque or the white dome of a saint's tomb. On the south the plain was shut in by a ridge of bare, black hills, appropriately named Jebel-el-Aswad, "The Black Mountains"; while away on the west, in the distance, Hermon rose in all its majesty, a pyramid of spotless snow. From whatever point one sees it, there are few landscapes in the world which, for richness and soft, enchanting beauty, can be compared with the plain of Damascus.

After riding about seven miles, during which we passed straggling groups of men—some on foot, some on horses and donkeys, and some on camels, most of them dressed like our guide, and all hurrying on in the same direction as ourselves—we reached the eastern extremity of the Black Mountains, and found ourselves on the sides of a narrow green vale, through the center of which flows the river Pharpar. A bridge here spans the stream; and beyond it, in the rich meadows, the *Hauran* caravan was being marshaled.

Up to this point the road is safe, and may be traveled almost at any time; but on crossing the Awaj we enter the domains of the Bedouin, whose law is the sword, and whose right is might. Our farther progress was liable to be disputed at any moment. The attacks of the Bedouin, when made, are sudden and impetuous; and resistance, to be effectual, must be prompt and decided. During the winter season this eastern route is in general pretty secure, as the Arab tribes have their encampments far distant on the banks of the Euphrates, or in the interior of the desert; but the war between the Druses and the government, which had just been concluded, had drawn these daring marauders from their customary haunts, and they endured the rain and snow of the Syrian frontier in the hope of plunder.

All seemed fully aware of this, and appeared to feel, here as elsewhere, that the hand of the Ishmaelite is against every man. Consequently stragglers hurried up and fell into the ranks; bales and packages on mules and camels were rearranged and more carefully adjusted; muskets and pistols were examined and cartridges got into a state of readiness; armed men were placed in something like order along the sides of the file of animals; and a few horsemen were sent on in front, to scour the neighboring hills and the skirts of the great plain beyond, so as to prevent surprise. A number of Druses who here joined the caravan, and who were easily distinguished by their snow-white turbans and bold, manly bearing, appeared to take the chief direction in these warlike preparations, though, as the caravan was mainly made up of Christians, one of these, called Musa, was the nominal leader. It was a strange and exciting scene, and one would have thought that an attempt to reduce such a refractory and heterogeneous multitude of men and animals to anything like order would be absolutely useless. Some of the camels and donkeys, breaking loose, scattered their loads over the plain, and spread confusion all around them; others growled, kicked, and brayed; drivers shouted and gesticulated; men and boys ran through the crowd, asking for missing brothers and companions; horsemen galloped from group to group, entreating and threatening by turns. At length, however, the order was given to march. It passed along from front to rear, and the next moment every sound was hushed; the very beasts seemed to comprehend its meaning, for they fell quietly into their places, and the long files, now four and five abreast, began to move over the grassy plain with a stillness that was almost painful.

The sun went down, and the short twilight was made still shorter by heavy clouds which drifted across the face of the sky. A thick rain began to fall, which made the prospect of a night march or a bivouac equally unpleasant. Still I rode on through the darkness, striving to dispel gloomy forebodings by the stirring memory of Bashan's ancient

glory, and the thought that I was now treading its soil and on my way to the great cities founded and inhabited four thousand years ago by the giant Rephaim. Before the darkness set in, Musa had pointed out to me the towers of three or four of these cities rising above the rocky barrier of the Lejah. How I strained my eyes in vain to pierce the deepening gloom! Now I knew that some of them must be close at hand. The sharp ring of my horse's feet on pavement startled me. This was followed by painful stumbling over loose stones, and the twisting of his limbs among jagged rocks. The sky was black overhead, the ground black beneath; the rain was drifting in my face, so that nothing could be seen.

A halt was called; and it was with no little pleasure that I heard the order given for the caravan to rest till the moon rose. "Is there any spot," I asked of an Arab at my side, "where we could get shelter from the rain?" "There is a house ready for you," he answered. "A house! Is there a house here?" "Hundreds of them. This is the town of Burâk."

We were conducted up a rugged winding path, which seemed, so far as we could make out in the dark and by the motion of our horses, to be something like a ruinous staircase. At length the dark outline of high walls began to appear against the sky, and presently we entered a paved street. Here we were told to dismount and give our horses to the servants. An Arab struck a light, and, inviting us to follow, passed through a low, gloomy door into a spacious chamber.

I looked with no little interest round the apartment of which we had taken such unceremonious possession; but the light was so dim, and the walls, roof, and floor so black, that I could make out nothing satisfactorily. Getting a torch from one of the servants, I lighted it and proceeded to examine the mysterious mansion; for, though drenched with rain and wearied with a twelve hours' ride, I could not rest. I felt an excitement such as I never before had experienced. I could scarcely believe in the reality of what I

saw and what I heard from my guides in reply to eager questions.

The house seemed to have undergone little change from the time its old master had left it; and yet the thick nitrous crust on its floor showed that it had been deserted for long ages. The walls were perfect, nearly five feet thick, built of large blocks of hewn stones, without lime or cement of any kind. The roof was formed of large slabs of the same black basalt, lying as regularly, and jointed as closely, as if the workmen had only just completed them. They measured twelve feet in length, eighteen inches in breadth, and six inches in thickness. The ends rested on a plain stone cornice, projecting about a foot from each side-wall. The chamber was twenty feet long, twelve wide, and ten high. The outer door was a slab of stone, four and a half feet high, four wide, and eight inches thick. It hung on pivots formed of projecting parts of the slab, working in sockets in the lintel and threshold; and, though so massive, I was able to open and shut it with ease.

At one end of the room was a small window with a stone shutter. An inner door, also of stone, but of finer workmanship, and not quite so heavy as the other, admitted to a chamber of the same size and appearance. From it a much larger door communicated with a third chamber, to which there was a descent by a flight of stone steps. This was a spacious hall, equal in width to the two rooms, and about twenty-five feet long by twenty high. A semicircular arch was thrown across it, supporting the stone roof; and a gate so large that camels could pass in and out opened on the street. The gate was of stone, and it appeared to have been open for ages. Here our horses were comfortably installed.

Such were the internal arrangements of this strange old mansion. It had only one story; and its simple, massive style of architecture gave evidence of a very remote antiquity. On a large stone which formed the lintel of the gateway there was a Greek inscription; but it was so high up, and my light so faint, that I was unable to decipher it, though I could see that the letters were of the oldest type. It

is probably the same which was copied by Burckhardt, and which bears a date apparently equivalent to the year B.C. 306.

Owing to the darkness of the night and the shortness of our stay, I was unable to ascertain from personal observation either the extent of Burâk or the general character of its buildings; but the men who gathered around me when I returned to my chamber had often visited it. They said the houses were all like the one we occupied, only some smaller, and a few larger, and that there were no great buildings. Burâk stands on the northeast corner of the Lejah, and was thus one of the frontier towns of ancient Argob. It is built upon rocks, and encompassed by rocks so wild and rugged as to render it a natural fortress.

After a few hours' rest the order for march was again given. We found our horses at the door, and mounting at once, we followed Musa. The rain had ceased, the sky was clear, and the moon shone brightly, half revealing the savage features of the environs of Burâk. I can never forget that scene. Huge masses of shapeless rocks rose up here and there, among and around the houses, to the height of fifteen and twenty feet, their summits jagged and their sides all shattered. Between them were pits and yawning fissures, as many feet in depth; while the flat surfaces of naked rock were thickly strewn with huge bowlders of basalt. The narrow, tortuous road by which Musa led us out was in places carried over chasms, and in places cut through cliffs. An ancient aqueduct ran alongside of it, which in former days conveyed a supply of water from a neighboring winter stream to the tanks and reservoirs from which the town gets its present name, Burâk, "the tanks." . . .

These aqueducts appear to have been constructed as follows: A shaft was sunk to the depth of ten to twenty feet at a spot where it was supposed water might be found; then a tunnel was excavated on the level of the bottom of the shaft, and in the direction of the town to be supplied. At the distance of about one hundred yards another shaft was sunk, connecting the tunnel with the surface; and so

the work was carried on until it was brought close to the city, where a great reservoir was made. Some of these aqueducts are nearly twenty miles in length; and even if no living spring should exist along their whole course, they soon collect in the rainy season sufficient surface water to supply the largest reservoirs. Springs are rare in Bashan. It is a thirsty land; but cisterns of enormous dimensions—some open, others covered—are seen in every city and village. . . .

Scrambling through, or rather over, a ruinous gateway, we entered the city of Bathanyeh. A wide street lay before us, the pavement perfect, the houses on each side standing, streets and lanes branching off to the right and left. There was something inexpressibly mournful in riding along that silent street, and looking in through half-open doors to one after another of those desolate houses, with the rank grass and weeds in their courts, and the brambles growing in festoons over the doorways, and branches of trees shooting through the gaping rents in the old walls. The ring of our horses' feet on the pavement awakened the echoes of the city and startled many a strange tenant. Owls flapped their wings around the gray towers; daws shrieked as they flew away from the house-tops; foxes ran in and out among the shattered dwellings, and two jackals rushed from an open door and scampered off along the street before us. . . .

One of the houses in which I rested for a time might almost be termed a palace. A spacious gateway, with massive folding doors of stone, opened from the street into a large court. On the left was a square tower some forty feet in height. Round the court, and opening into it, were the apartments, all in perfect preservation; and yet the place does not seem to have been inhabited for centuries. Greek inscriptions on the principal buildings prove that they existed at the commencement of our era; and in the whole town I did not see a solitary trace of Mohammedan occupation, so that it has probably been deserted for at least a thousand years.

Salcah is one of the most remarkable cities in Palestine.

It has been long deserted; and yet, as nearly as I could estimate, five hundred of its houses are still standing, and from three to four hundred families might settle in it at any moment without laying a stone or expending an hour's labor on repairs. The circumference of the town and castle together is about three miles. Besides the castle, a number of square towers, like the belfries of churches, and a few mosques appear to be the only public buildings. . . .

The castle occupies the summit of a steep conical hill, which rises to the height of some three hundred feet, and is the southern point of the mountain range of Bashan. Round the base of the hill is a deep moat, and another still deeper encircles the walls of the fortress. The building is a patchwork of various periods and nations. The foundations are Jewish, if not earlier; Roman rustic masonry appears about them; and over all is lighter Saracenic work, with beautifully interlaced inscriptions. The exterior walls are not much defaced, but the interior is one confused mass of ruins.

The view from the top is wide and wonderfully interesting. It embraces the whole southern slope of the mountains, which, though rocky, are covered from bottom to top with artificial terraces and fields divided by stone fences. . . . Wherever I turned my eyes, towns and villages were seen. . . . On the section of the plain between south and east I counted fourteen towns, all of them, so far as I could see with my telescope, habitable like Salcah, but entirely deserted. From this one spot I saw upward of thirty deserted towns. . . . Not only is the country—plain and hillside alike—checkered with fenced fields, but groves of fig-trees are here and there seen, and terraced vineyards still clothe the sides of some of the hills. These are neglected and wild, but not fruitless. Mahmood tells us that they produce great quantities of figs and grapes, which are rifled year after year by the Bedouins in their periodical raids. Nowhere on earth is there such a melancholy example of tyranny, rapacity, and misrule as here. Fields, pastures, vineyards, houses, villages, cities—all alike deserted and waste. Even the few inhabitants that

have hidden themselves among the rocky fastnesses and mountain defiles drag out a miserable existence, oppressed by robbers of the desert on the one hand and robbers of the government on the other. . . .

I could not but remark, while wandering through the streets and lanes of Kureiyeh—the biblical Kerioth—that the private houses bear the marks of the most remote antiquity. The few towers and temples, which inscriptions show to have been erected in the first centuries of the Christian era, are modern in comparison with the colossal walls and massive stone doors of the private houses. The simplicity of their style, their low roofs, the ponderous blocks of roughly hewn stone with which they are built, the great thickness of the walls, and the heavy slabs which form the ceilings—all point to a period far earlier than the Roman age, and probably even antecedent to the conquest of the country by the Israelites. Moses makes special mention of the strong cities of Bashan, and speaks of their high walls and gates. He tells us, too, in the same connection, that Bashan was called "the land of the giants" (or Rephaim); leaving us to conclude that the cities were built by giants.

Now, the houses of Kerioth and other towns of Bashan appear to be just such dwellings as a race of giants would build. The walls, the roofs, but especially the ponderous gates, doors, and bars, are in every way characteristic of a period when architecture was in its infancy, when giants were masons, and when strength and security were the grand requisites. I measured a door in Kerioth; it was nine feet high, four and a half feet wide, and ten inches thick—one solid slab of stone. I saw the folding-doors of another town in the mountains still larger and heavier. Time produces little effect on such buildings as these. The heavy stone slabs of the roofs resting on the massive walls make the structure as firm as if built of solid masonry; and the black basalt used is almost as hard as iron.

These houses are the only specimens in the world of the ordinary private dwellings of remote antiquity. The monuments designed by the genius and reared by the wealth of

imperial Rome are fast moldering to ruin in this land; temples, palaces, tombs, fortresses, are all shattered, or prostrate in the dust; but the simple, massive houses of the Rephaim are in many cases as perfect as if completed only yesterday.

ASIA

Ascent of Mount Ararat

By JAMES BRYCE

ABOUT one A.M. we got off, thirteen in all, and made straight across the grassy hollows for the ridges which trend up toward the great cone, running parallel in a west-northwesterly direction, and enclosing between them several long, narrow depressions, hardly deep enough to be called valleys. The Kurds led the way, and at first we made pretty good progress. The Cossacks seemed fair walkers, though less stalwart than the Kurds; the pace generally was better than that with which Swiss guides start. However, we were soon cruelly undeceived. In twenty-five minutes there came a steep bit, and at the top of it they flung themselves down on the grass to rest. So did we all. Less than half a mile farther, down they dropped again, and this time we were obliged to give the signal for resuming the march. In another quarter of an hour they were down once more, and so it continued for the rest of the way. Every ten minutes' walking—it was seldom steep enough to be called actual climbing—was followed by seven or eight minutes of sitting still, smoking and chattering. How they did chatter! It was to no purpose that we continued to move on when they sat down, or that we rose to go before they had sufficiently rested. They looked at one another, so far as I could make out by the faint light, and occasionally they laughed; but they would not and did not stir till

such time as pleased themselves. We were helpless. Impossible to go on alone; impossible also to explain to them the reason why every moment was precious, for the man who had acted as interpreter had been obliged to stay behind at Sardarbulakh, and we were absolutely without means of communication with our companions. One could not even be angry, had there been any use in that, for they were perfectly good-humored. It was all very well to beckon them, or pull them by the elbow, or clap them on the back; they thought this was only our fun, and sat still and chattered all the same. When it grew light enough to see the hands of a watch, and mark how the hours advanced while the party did not, we began for a second time to despair of success.

About three A.M. there suddenly sprang up from behind the Median mountains the morning-star, shedding a light such as no star ever gave in these northern climes of ours— a light that almost outshone the moon. An hour later it began to pale in the first faint flush of yellowish light that spread over the eastern heaven; and first the rocky masses above us, then Little Ararat, throwing behind him a gigantic shadow, then the long lines of mountains beyond the Araxes, became revealed, while the wide Araxes plain still lay dim and shadowy below. One by one the stars died out as the yellow turned to a deeper glow that shot forth in long streamers, the rosy fingers of the dawn, from the horizon to the zenith. Cold and ghostly lay the snows on the mighty cone; till at last there came upon their topmost slope, 6000 feet above us, a sudden blush of pink. Swiftly it floated down the eastern face, and touched and kindled the rocks just above us. Then the sun flamed out, and in a moment the Araxes valley and all the hollows of the savage ridges we were crossing were flooded with overpowering light.

It was nearly six o'clock, and progress became easier now that we could see our way distinctly. The Cossacks seemed to grow lazier, halting as often as before and walking less briskly; in fact, they did not relish the exceeding

roughness of the jagged lava ridges along whose tops or sides we toiled. I could willingly have lingered here myself; for in the hollows, wherever a little soil appeared, some interesting plants were growing, whose similarity to and difference from the Alpine species of Western Europe alike excited one's curiosity. Time allowed me to secure only a few; I trusted to get more on the way back, but this turned out to be impossible. As we scrambled along a ridge above a long, narrow, winding glen filled with loose blocks, one of the Kurds suddenly swooped down like a vulture from the height on a spot at the bottom, and began peering and grubbing among the stones. In a minute or two he cried out, and the rest followed; he had found a spring, and by scraping in the gravel had made a tiny basin out of which we could manage to drink a little. Here was a fresh cause of delay; everybody was thirsty, and everybody must drink; not only the water which, as we afterward saw, trickled down hither under the stones from a snow-bed seven hundred feet higher, but the water mixed with some whisky from a flask my friend carried, which even in this highly diluted state the Cossacks took to heartily. When at last we got them up and away again, they began to waddle and straggle; after a while two or three sat down, and plainly gave us to see they would go no farther. By the time we had reached a little snow-bed whence the now strong sun was drawing a stream of water, and halted on the rocks beside it for breakfast, there were only two Cossacks and the four Kurds left with us, the rest having scattered themselves about somewhere lower down. We had no idea what instructions they had received, nor whether, indeed, they had been told anything except to bring us as far as they could, to see that the Kurds brought the baggage, and to fetch us back again, which last was essential for Jaafar's peace of mind. We concluded, therefore, that if left to themselves they would probably wait our return; and the day was running on so fast that it was clear there was no more time to be lost in trying to drag them along with us.

Accordingly, I resolved to take what I wanted in the way of food, and start at my own pace. My friend, who carried more weight, and had felt the want of training on our way up, decided to come no farther, but wait about here, and look out for me toward nightfall. We noted the landmarks carefully—the little snow-bed, the head of the glen covered with reddish masses of stone and gravel; and high above it, standing out of the face of the great cone of Ararat, a bold peak or rather projecting tooth of black rock, which our Cossacks called the Monastery, and which, I suppose, from the same fancied resemblance to a building, is said to be called in Tatar Tach Kilissa, "the church rock." It is doubtless an old cone of eruption, about 13,000 feet in height, and is really the upper end of the long ridge we had been following, which may perhaps represent a lava flow from it, or the edge of a fissure which at this point found a vent. . . .

It was an odd position to be in: guides of two different races, unable to communicate either with us or with one another; guides who could not lead and would not follow; guides one-half of whom were supposed to be there to save us from being robbed and murdered by the other half, but all of whom, I am bound to say, looked for the moment equally simple and friendly, the swarthy Iranian as well as the blue-eyed Slav.

At eight o'clock I buckled on my canvas gaiters, thrust some crusts of bread, a lemon, a small flask of cold tea, four hard-boiled eggs, and a few meat lozenges into my pocket, bade good-by to my friend, and set off. Rather to our surprise, the two Cossacks and one of the Kurds came with me, whether persuaded by a pantomime of encouraging signs, or simply curious to see what would happen. The ice-ax had hugely amused the Cossacks all through. Climbing the ridge to the left, and keeping along its top for a little way, I then struck across the semicircular head of a wide glen, in the middle of which, a little lower, lay a snow-bed over a long steep slope of loose broken stones and sand. This slope, a sort of talus or "screen," as they say in the

Lake country, was excessively fatiguing from the want of firm foothold; and when I reached the other side, I was already so tired and breathless, having been on foot since midnight, that it seemed almost useless to persevere farther. However, on the other side I got upon solid rock, where the walking was better, and was soon environed by a multitude of rills bubbling down over the stones from the stone-slopes above. The summit of Little Ararat, which had for the last two hours provokingly kept at the same apparent height above me, began to sink, and before ten o'clock I could look down upon its small flat top, studded with lumps of rock, but bearing no trace of a crater. Mounting steadily along the same ridge, I saw at a height of over 13,000 feet, lying on the loose blocks, a piece of wood about four feet long and five inches thick, evidently cut by some tool, and so far above the limit of trees that it could by no possibility be a natural fragment of one. Darting on it with a glee that astonished the Cossack and the Kurd I held it up to them, and repeated several times the word "Noah." The Cossack grinned; but he was such a cheery, genial fellow that I think he would have grinned whatever I had said, and I cannot be sure that he took my meaning, and recognized the wood as a fragment of the true Ark. Whether it was really gopher wood, of which material the Ark was built, I will not undertake to say, but am willing to submit to the inspection of the curious the bit which I cut off with my ice-ax and brought away. Anyhow, it will be hard to prove that it is not gopher wood. And if there be any remains of the Ark on Ararat at all—a point as to which the natives are perfectly clear—here rather than the top is the place where one might expect to find them, since in the course of ages they would get carried down by the onward movement of the snow-beds along the declivities. This wood, therefore, suits all the requirements of the case. In fact, the argument is for the case of a relic exceptionally strong; the Crusaders who found the Holy Lance at Antioch, the archbishop who recognized the Holy Coat at Trèves, not to speak of many others, proceeded

upon slighter evidence. I am, however, bound to admit that another explanation of the presence of this piece of timber on the rocks of this vast height did occur to me. But as no man is bound to discredit his own relic, and such is certainly not the practice of the Armenian Church, I will not disturb my readers' minds or yield to the rationalizing tendencies of the age by suggesting it.

Fearing that the ridge by which we were mounting would become too precipitous higher up, I turned off to the left, and crossed a long, narrow snow-slope that descended between this ridge and another line of rocks more to the west. It was firm, and just steep enough to make steps cut in the snow comfortable, though not necessary; so the ice-ax was brought into use. The Cossack who accompanied me—there was but one now, for the other Cossack had gone away to the right some time before, and was quite lost to view—had brought my friend's alpenstock, and was developing a considerable capacity for wielding it. He followed nimbly across; but the Kurd stopped on the edge of the snow, and stood peering and hesitating, like one who shivers on the plank at a bathing-place, nor could the jeering cries of the Cossack induce him to venture on the treacherous surface. Meanwhile, we who had crossed were examining the broken cliff which rose above us. It looked not exactly dangerous, but a little troublesome, as if it might want some care to get over or through. So after a short rest I stood up, touched my Cossack's arm, and pointed upward. He reconnoitered the cliff with his eye, and shook his head. Then, with various gestures of hopefulness, I clapped him on the back, and made as if to pull him along. He looked at the rocks again and pointed to them, stroked his knees, turned up and pointed to the soles of his boots, which certainly were suffering from the lava, and once more solemnly shook his head. This was conclusive; so I conveyed to him by pantomime that he had better go back to the bivouac where my friend was, rather than remain here alone, and that I hoped to meet him there in the evening; took an affectionate farewell, and turned toward

the rocks. There was evidently nothing for it but to go on alone. It was half-past ten o'clock, and the height about 13,600 feet, Little Ararat now lying nearly one thousand feet below the eye. . . .

Not knowing how far the ridge I was following might continue passable, I was obliged to stop frequently to survey the rocks above, and erect little piles of stone to mark the way. This not only consumed time, but so completely absorbed the attention that for hours together I scarcely noticed the marvelous landscape spread out beneath, and felt the solemn grandeur of the scenery far less than many times before on less striking mountains. Solitude at great heights, or among majestic rocks or forests, commonly stirs in us all deep veins of feeling, joyous or saddening, or more often of joy and sadness mingled. Here the strain on the observing senses seemed too great for fancy or emotion to have any scope. When the mind is preoccupied by the task of the moment, imagination is checked. This was a race against time, in which I could only scan the cliffs for a route, refer constantly to the watch, husband my strength by morsels of food taken at frequent intervals, and endeavor to conceive how a particular block or bit of slope which it would be necessary to recognize would look when seen the other way in descending. . . .

All the way up this rock-slope, which proved so fatiguing that for the fourth time I had almost given up hope, I kept my eye fixed on its upper end to see what signs there were of crags or snow-fields above. But the mist lay steadily at the point where the snow seemed to begin, and it was impossible to say what might be hidden behind that soft white curtain. As little could I conjecture the height I had reached by looking around, as one so often does on mountain ascents, upon other summits; for by this time I was thousands of feet above Little Ararat, the next highest peak visible, and could scarcely guess how many thousands. From this tremendous height it looked more like a broken obelisk than an independent summit 12,800 feet in height. Clouds covered the farther side of the great snow basin, and were seething like

waves about the savage pinnacles, the towers of the Jinn palace, which guard its lower margin, and past which my upward path had lain. With mists to the left and above, and a range of black precipices cutting off all view to the right, there came a vehement sense of isolation and solitude, and I began to understand better the awe with which the mountain silence inspires the Kurdish shepherds. Overhead the sky had turned from dark blue to an intense bright green, a color whose strangeness seemed to add to the weird terror of the scene. It wanted barely an hour to the time when I had resolved to turn back; and as I struggled up the crumbling rocks, trying now to right and now to left, where the foothold looked a little firmer, I began to doubt whether there was strength enough left to carry me an hour higher. At length the rock-slope came suddenly to an end, and I stepped out upon the almost level snow at the top of it, coming at the same time into the clouds, which naturally clung to the colder surfaces. A violent west wind was blowing, and the temperature must have been pretty low, for a big icicle at once enveloped the lower half of my face, and did not melt till I got to the bottom of the cone four hours afterward. Unluckily I was very thinly clad, the stout tweed coat reserved for such occasions having been stolen on a Russian railway. The only expedient to be tried against the piercing cold was to tighten in my loose light coat by winding around the waist a Spanish *faja*, or scarf, which I had brought up to use in case of need as a neck wrapper. Its bright purple looked odd enough in such surroundings, but as there was nobody there to notice, appearances did not much matter. In the mist, which was now thick, the eye could pierce only some thirty yards ahead; so I walked on over the snow five or six minutes, following the rise of its surface, which was gentle, and fancying there might still be a good long way to go. To mark the backward track I trailed the point of the ice-ax along behind me in the soft snow, for there was no longer any landmark; all was cloud on every side. Suddenly to my astonishment the ground began to fall away to the north;

I stopped; a puff of wind drove off the mists on one side, the opposite side to that by which I had come, and showed the Araxes plain at an abysmal depth below. It was the top of Ararat.

ASIA

The Lost City of Petra

By JOHANN LUDWIG BURCKHARDT

SOUTH of the Dead Sea, at about sixteen hours' distance from the extremity of that body of water, is the Valley of Araba, running in almost a straight line, declining to the west, as far as Akaba, at the extremity of the eastern branch of the Red Sea. The existence of this valley appears to have been unknown to ancient as well as to modern geographers, although it is a very remarkable feature in the geography of Syria and Arabia Petræa, and is still more interesting for its productions. In this valley of the Jordan the manna is still found; it drops from the sprigs of several trees, but principally from the Gharrab. It is collected by the Arabs, who make cakes of it and who eat it with butter; they call it Assal Beyrook, or the honey of Beyrook. Indigo, gum-arabic, and the silk-tree called Asheyr, whose fruit encloses a white, silky substance from which the Arabs twist their matches, grow in this valley.

I was particularly desirous of visiting Wady Moussa, of the antiquities of which I had heard the country people speak in terms of great admiration, and from thence I had hoped to cross the desert in a straight line to Cairo; but my guide was afraid of the hazards of a journey through the desert, and insisted on my taking the road to Akaba, the ancient Ezion-geber, at the extremity of the eastern branch of the Red Sea where, he said, we might join some caravan and continue our route toward Egypt. I wished, on the

contrary, to avoid Akaba as I knew that the Pasha of Egypt kept there a numerous garrison to watch the movements of the Wahabees and of his rival the Pasha of Damascus. A person, therefore, like myself, coming from the latter place, without any papers to show who I was or why I had taken that circuitous route, would certainly have roused the suspicions of the officer commanding at Akaba, and the consequences might have been dangerous to me among the savage soldiery of that garrison. The road from Shobak to Akaba lies to the east of Wady Moussa, and to have quitted it out of mere curiosity to see the wady would have looked suspicious in the eyes of the Arabs. I therefore pretended to have made a vow to slaughter a goat in honor of Haroun (Aaron), whose tomb I knew was situated at the extremity of the valley, and by this stratagem I thought that I should have the means of seeing the valley on my way to the tomb. To this my guide had nothing to oppose; the dread of drawing down upon himself by resistance the wrath of Haroun completely silenced him.

I hired a guide to Eldjy to conduct me to Haroun's tomb, and paid him with a pair of old horseshoes. He carried the goat, and gave me a skin of water to carry, as he knew there was no water in the wady below. In following the rivulet of Eldjy westward, the valley soon narrows again, and it is here that the antiquities of Wady Moussa (Petra) begin. Of these I regret that I am not able to give a very complete account; but I knew well the character of the people around me. I was without protection in the midst of a desert where no traveler had ever before been seen, and a close examination of these works of the infidels, as they are called, would have excited suspicions that I was a magician in search of treasures. I should at least have been detained and prevented from prosecuting my journey to Egypt, and in all probability should have been stripped of the little money which I possessed, and, what was of infinitely more value to me, of my journal. Future travelers may visit the spot under the protection of an armed force; the inhabitants will become more accustomed to the researches of strangers,

and the antiquities of Wady Moussa will then be found to rank among the most curious works of ancient art. The approach to Wady Moussa is a ravine, in places only twelve feet wide, and with rocky walls one hundred feet high. Along this ravine are the famous ruin of Petra, the Khusna, or "treasury of Pharaoh," and a theater, both cut in the solid rock. The floor of the valley within, about two miles wide, is strewn with ruins.

Near the west end of Wady Moussa are the remains of a stately edifice, of which part of the wall is still standing; the inhabitants call it Kasr Bint Faraoun, or the palace of Pharaoh's daughter. In my way I had entered several sepulchers, to the surprise of my guide, but when he saw me turn out of the foot-path towards the Kasr, he exclaimed, "I see now clearly that you are an infidel, who has some particular business among the ruins of the city of your forefathers; but depend upon it, that we shall not suffer you to take out a single para of all the treasures hidden therein, for they are in our territory and belong to us."

I replied that it was mere curiosity that prompted me to look at the ancient works, and that I had no other view in coming there than to sacrifice to Haroun; but he was not easily persuaded, and I did not think it prudent to irritate him by too close an inspection of the palace, as it might have led him to declare, on our return, his belief that I had found treasures, which might have led to a search of my person and to the detection of my journal, which would most certainly have been taken from me as a book of magic. It was of no avail to tell them to follow me, and see whether I searched for money. Their reply was, "Of course you will not dare to take it out before us, but we know that if you are a skillful magician you will order it to follow you through the air to whatever place you please."

The sun had already set when we arrived on the plain. It was too late to reach the tomb, and I was excessively fatigued; I therefore hastened to kill the goat in sight of the tomb, at a spot where I found a number of heaps of stones, placed there in token of as many sacrifices in honor of that

saint. While I was in the act of slaying the animal my guide exclaimed aloud, "O Haroun, look upon us! it is for you we slaughter this victim! O Haroun, be content with our good intentions, for it is but a lean goat! O Haroun, smooth our paths; and praise be to the Lord of all creatures!" This he repeated several times, after which he covered the blood that had fallen to the ground with a heap of stones; we then dressed the best part of the flesh for our supper as expeditiously as possible, for the guide was afraid of the fire being seen, and of its attracting thither some robbers.

On our return we crossed the valley of Araba, ascended on the other side of it the barren mountain of Beyane, and entered the desert called El Tih, which is the most barren and horrid tract of country I have ever seen; black flints cover the chalky or sandy ground, which in most places is without any vegetation. The tree which produces the gum-arabic grows in some spots, and the tamarisk is met with here and there; but the scarcity of water forbids much extent of vegetation, and the hungry camels are obliged to go in the evening for whole hours out of the road in order to find some withered shrubs upon which to feed. During ten days' forced marches we passed only four springs or wells, of which one only, at about eight hours east of Suez, was of sweet water. The others were brackish or sulphurous. We passed at a short distance to the north of Suez, and arrived at Cairo by the pilgrim road. . . .

I left Hadda disguised as a Mussulman pilgrim to Mecca. My guide, who knew nothing further respecting me than that I had business with the pasha at Tayf, that I performed all the outward observances of a Moslem pilgrim, and that I had been liberal to him before our departure, asked me the reason of his having been ordered to take me by the northern road. I replied that it was probably thought shorter than the other. "That is a mistake," he replied; "the Mecca road is quite as short, and much safer; and if you have no objection we will proceed by that." This was just what I wished, though I had taken care not

to betray any anxiety on the subject; and we accordingly followed the great road, in company with the other travelers.

Res el Kora is the most beautiful spot in the Hedjah, and more picturesque and delightful than any spot I had seen since my departure from Lebanon, in Syria. The top of Jebel Kora is flat, but large masses of granite lie scattered over it, the surface of which, like that of the granite rocks near the second cataract of the Nile, is blackened by the sun. Several small rivulets descend from this peak and irrigate the plain, which is covered with verdant fields and large shady trees on the side of the granite rocks. To those who have known only the dreary and scorching sands of the lower country of the Hedjah, the scene is as surprising as the keen air which blows here is refreshing. Many of the fruit-trees of Europe are found here: figs, apricots, peaches, apples, the Egyptian sycamore, almonds, pomegranates, but particularly vines, the produce of which is of the best quality. After passing through this delightful district for about half an hour, just as the sun was rising, when every leaf and blade of grass diffused a fragrance as delightful to the smell as was the landscape to the eye, I halted near the largest of the rivulets, which, although not more than two paces across, nourishes upon its banks a green alpine turf such as the mighty Nile, with all its luxuriance, can never produce in Egypt. . . .

At the northeast corner of the Kaaba, near the door, is the famous Black Stone; it forms a part of the sharp angle of the building at four or five feet above the ground. It is an irregular oval of about seven inches in diameter, with an undulating surface, composed of about a dozen smaller stones of different sizes and shapes, well joined together with a small quantity of cement, and perfectly smoothed. It looks as if the whole had been broken into many pieces by a violent blow, and then united again. It is very difficult to determine accurately the quality of this stone, which has been worn to its present surface by the millions of touches and kisses it has received. It appeared

to me like a lava, containing several small extraneous particles of a whitish and of a yellowish substance. Its color is now a deep reddish-brown, approaching to black. It is surrounded on all sides by a border, composed of a substance which I took to be a close cement of pitch and gravel, of a similar, but not quite the same, brownish color. This border serves to support its detached pieces. It is of two or three inches in breadth, and rises a little above the surface of the stone. Both the border and the stone itself are encircled by a silver band, broader below than above and on the two sides, with a considerable swelling below, as if a part of the stone were hidden under it. The lower part of the border is studded with silver nails.

In the procession to Mount Ararat every pilgrim issued from his tent to walk over the plains and take a view of the busy crowds assembled there. Long streets of tents, fitted up as bazaars, furnished all kinds of provisions. The Syrian and Egyptian cavalry were exercised by their chiefs early in the morning, while thousands of camels were seen feeding on the dry shrubs of the plain all around the camp. . . .

The Syrian Hadj was encamped on the south and southwest side of the mountain, an isolated mass of granite about two hundred feet high, the Egyptian on the southeast. Around the house of the Sherif, Yahya himself was encamped with his Bedouin troops, and in its neighborhood were all the Hedjez people. Mohammed Ali, and Soleyman, Pasha of Damascus, as well as several of their officers, had very handsome tents; but the most magnificent of all was that of the wife of Mohammed Ali, the mother of Foossoon Pasha and Ibraham Pasha, who had lately arrived from Cairo for the Hadj with a truly royal equipage, five hundred camels being necessary to transport her baggage from Jidda to Mecca. Her tent was in fact an encampment, consisting of a dozen tents of different sizes inhabited by her women; the whole inclosed by a wall of linen cloth eight hundred paces in circuit, the single entrance to which was guarded by eunuchs in splendid dresses. Around this inclosure were pitched the tents of the men who formed her numerous suite.

The beautiful embroidery on the exterior of this linen palace, with the varied colors displayed in every part of it, constituted an object which reminded me of some descriptions in the familiar Arabian tales of the "Thousand and One Nights."

When the preacher began his sermon, the two pashas, with their whole cavalry drawn up in two squadrons behind them, took their post in the rear of the deep line of camels of the hadjis, to which those of the people of the Hedjaz were also joined; and here they waited in solemn and respectful silence till the conclusion of the sermon. Further removed from the preacher was the Sherif Yahya, with his small body of soldiers, distinguished by several green standards carried before him. The two mahmals, or holy camels, which carry on their backs the high structure that serves as the banner of their respective caravans, made way with difficulty through the ranks of camels that encircled the southern and eastern sides of the hill opposite to the preacher, and took their station, surrounded by their guards, directly under the platform in front of him. The preacher, or Khatyb, who is usually the Kadid of Mecca, was mounted upon a finely-caparisoned camel, which had been led up to the steps; it being traditionally said that Mohammed was always seated when he addressed his followers, a practice in which he was imitated by all the caliphs who came to the Hadj, and who from thence addressed their subjects in person. The Turkish gentleman of Constantinople, however, unused to camel-riding, could not keep his seat so well as the hardy Bedouin prophet, and the camel becoming unruly, he was soon obliged to alight from it. He read his sermon from a book in Arabic which he held in his hands. At intervals of every four or five minutes he paused and stretched forth his arms to implore blessings from above, while the assembled multitudes around and before him waved the skirts of their ihrams over their heads and rent the air with shouts of *Lebeyk, Allah, huma, Lebeyk!* "Here we are at thy bidding, O God!" During the wavings of the ihrams, the skirts of the mountain, thickly crowded as it was by the

people in their white garments, had the appearance of a cataract of water, while the green umbrellas with which several thousand hadjis sitting on their camels below were provided, bore some resemblance to a verdant plain.

The Ride to Khiva

By FREDERICK G. BURNABY

HAVING once resolved to go to Central Asia, the next question was how to execute my intention; and, on returning to England from Africa, I eagerly read every book that could be found and which seemed likely to give any information about the country which I proposed to visit. Vambéry's "Travels," Abbott's "From Herat to Khiva," and MacGahan's "Campaigning on the Oxus," were each in turn studied, and, judging by the difficulties that the gallant correspondent of the "New York Herald" had to overcome before he carried his project of reaching Khiva into execution, I felt convinced that the task I had laid out for myself was anything but an easy one.

The time of year in which I should have to attempt the journey was another obstacle to the undertaking, for my leave of absence from my regiment would not begin until December. I had already, in previous journeys through Russia, discovered what the term "cold" really means in that country, and, judging from the weather experienced by Captain Abbott when traveling in the month of March in a latitude a good deal to the south of that which seemed to me the most practicable, I felt convinced that careful preparations must be made for a ride through the steppes in midwinter or that I should inevitably be frozen. The cold of the Kirghiz desert is a thing unknown, I believe, in any other part of the world, or even in the Arctic regions. An

enormous expanse of flat country, extending for hundreds of miles and devoid of everything save snow and salt lakes and here and there *saksavol*, a species of bramble-tree, would have to be traversed on horseback ere Khiva could be reached. The winds in those parts of Asia are unknown to the inhabitants of Europe, who, when they grumble at the so-called east wind, can little imagine what that wind is like in those countries which lie exposed to the full fury of its first onslaught. For there you meet with no warm ocean to mollify its rigor, no tree, no rising land, no hills or mountains to check it in its course, and it blows on uninterruptedly over a vast snow and salt covered track, until, absorbing the saline matter, it cuts the faces of those exposed to its gusts with a sensation more like the application of the edge of a razor than anything else to which it can be likened.

There was, beside this, something else to be taken into consideration. I was well aware that no assistance could be expected from the Russian authorities, who might not content themselves by indirectly throwing obstacles in my way, but might even stop me by sheer force if they found all other ways fail. The account of the prohibitory order which I had seen published in the "Pall Mall Gazette" was, I had every reason to believe, correct; and should I not find, after crossing the Ural river, and entering Asia, that my long sleigh journey had been all to no purpose and have to retrace my steps through European Russia? These were my first impressions on arriving in England; but on talking the matter over with some Russians of my acquaintance, they assured me that I was entirely mistaken; that, on the contrary, the authorities at St. Petersburg would readily permit English officers to travel in Central Asia, and it was observed that the order to which I had alluded referred only to merchants or people who tried to smuggle contraband goods into the recently annexed Khanates.

A few months later I had the honor of making the acquaintance of his Excellency Count Schouvaloff, the Russian ambassador in London and formerly the head of the secret

police at St. Petersburg. He was excessively kind and promised to do what he could to further my plans; but in an answer to a straightforward question as to whether I should be permitted to travel in Russian Asia or not his reply was: "My dear sir, that is a subject about which I cannot give you any answer; but, on arriving at St. Petersburg, the authorities there will be able to afford you every possible information." It was a diplomatic answer—one which bound the count to nothing, and I went away charmed with the tact and affability of the Russian ambassador. Apparently there was nothing to be learned officially from Russian sources; but unofficially, one by one, many little bits of information crept out. I now learned that General Milutin, the Minister of War at St. Petersburg, was personally very opposed to the idea of an English officer traveling in Central Asia, particularly in that part which lies between the boundaries of British India and Russia. According to him, a Russian traveler, a Mr. Pachino, had not been well treated by the authorities in India, and this gentleman had not been permitted to enter Afghanistan, and, in consequence, General Milutin did not see why he should allow an Englishman to do what was denied to a Russian subject.

Another peculiarity which I remarked in several Russians whose acquaintance I had at that time the honor of making, it may here be not out of place to mention. This was their desire to impress upon my mind the great advantage it would be for England to have a civilized neighbor like Russia on her Indian frontier; and when I did not take the trouble to dissent from their views—for it is a waste of breath to argue with Russians about this question—how eager they were for me to impress their line of thought upon the circle of people with whom I was the more immediately connected. Of course, the arguments brought forward were based upon purely philanthropic motives, upon Christianity and civilization. They said that the two great powers ought to go together hand in glove; that there ought to be railways all through Asia, formed by Anglo-Russian companies; that Russia and England had every sympathy

in common which should unite them; that they both hated Germany and loved France; that England and Russia could conquer the world, and so on.

It was a line of reasoning delightfully Russian, and, though I was not so rude as to differ from my would-be persuaders and lent an attentive ear to all their eloquence, I could not help thinking that the mutual sympathy between England and Germany is much greater than that between England and Russia; that the Greek faith, as practiced by the lower orders in Russia, is pure paganism in comparison with the Protestant religion which exists in Prussia and Great Britain; that Germany and Great Britain are natural allies against Russia or any other power aggressively disposed toward them; that Germans and Englishmen who are well acquainted with Russia understand by the term "Russian civilization" something diametrically opposite to what is attributed to it by those people who form their ideas of Muscovite progress from the few Russians whom they meet abroad; and that the Honduras railway would be a paying concern to its English shareholders in comparison with an Anglo-Russian line to be constructed in Central Asia with English capital and Russian directors.

The time was wearing on, November was drawing to a close, my leave of absence would begin on the first of the following month, and on that day I must begin my travels. Preparations were rapidly made. Under the advice of Captain Allen Young, of Arctic fame, I ordered a huge water-proof and, consequently, air-proof, bag of prepared sail-cloth. The bag was seven feet and a half long and ten feet around. A large aperture was left on one side, and the traveler could thus take up his quarters inside and sleep well protected from the cold winds. The bag would also be useful in many other ways, and I found it of great convenience for every other purpose save the one for which it was originally intended. The manufacturer, not calculating on the enormous dimensions an individual assumes when enveloped in furs, had not made the aperture large enough, and the consequence was that the difficulties, when I at-

tempted to take a header into the recess of my sleeping apartment, were almost insurmountable, and only on one occasion, and when clad somewhat more lightly than usual, I succeeded in effecting an entrance. Four pairs of the thickest Scotch fishing stockings were also ordered, and jerseys and flannel shirts of a texture to which people in this country are but little accustomed. Then came a suit of clothes, made by Messrs. Kine of Regent Street, and in which they assured me it would be impossible to feel cold. The clothes, I must admit, were exceptionally well made and well suited to be worn under a sheepskin attire; but I cannot wish my worst enemy a greater punishment than forcing him to sleep out on the steppes in winter time with mere cloth attire, no matter how thick. Fur or skins of some kind must be worn, or without this precaution the traveler, should he once close his eyes, will undergo a great risk of never opening them again. Two pairs of boots lined with fur were also taken; and for physic—with which it is as well to be supplied when traveling in out-of-the-way places—some quinine and Cockle's pills, the latter a most invaluable medicine, and one which I have used on the natives of Central Africa with the greatest possible success. In fact, the marvelous effects produced upon the mind and body of an Arab sheik, who was impervious to all native medicines, when I administered to him five Cockle's pills, will never fade from my memory, and a friend of mine, who passed through the same district many months afterward, informed me that my fame as a "medicine man" had not died out, but that the marvelous cure was even then a theme of conversation in the bazaar.

So far as I could learn from the books which related to Central Asia, there would be but little game and nothing particular in the shape of sport; so I determined not to take a rifle, when the cartridges would have considerably added to the weight of my luggage, the prime object being to travel as light as possible. However, as it was well to have some sort of gun in the event of falling in with wild fowl, which I had been told abounded in some places, I

took a favorite old No. 12 small bore, and some cartridges made up with No. 5 shot and ball, in the event of falling in with any bears or wolves, while a regulation revolver, with about twenty cartridges, made up my defensive arsenal in the event of an attack from the Turkomans. The next thing to be thought of was a cooking apparatus, and if I had taken the advice of many kind friends I should have traveled with a *batterie de cuisine* sufficient for the wants of Mr. Soyer himself. But canteens could not be thought of for a moment, on account of the extra weight, so I limited myself to two soldiers' mess tins, and admirable little utensils they are, too, whether for cooking over a spirit lamp or on a fire, and far superior to any of the more costly and cumbersome articles especially invented to get out of order and perplex the traveler. A trooper's hold-all, with the accompanying knife, fork, and spoon, completed my kit, and with a thermometer, barometer, and pocket sextant by way of instruments, I was ready to start. Even this amount of luggage was much more than was desirable, and when placing the baggage for my journey—consisting of the sleeping-sack, a pair of saddle-bags, railway bag and gun—into the scales, I found that it weighed exactly eighty-five pounds. An officer in the Foot-guards, my friend K——, wished very much to accompany me in my journey, and he would have been a most cheery and agreeable companion, as he was accustomed to travel and capable of roughing it to any amount; but as he was ignorant of Russian,—and by this time I was thoroughly aware of the difficulties that would most likely be thrown in my way, and of the little chance I had of getting to Khiva alone,—I was compelled at the last moment, with great reluctance, to decline his proposal.

. . . . . .

On the track again, but this time alone in my apartment till I was joined by an official, whose business it was to inspect the line between Moscow and Riayan. His chief object was to find out if any unnecessary delays took place at the different stations on this railway, a number of complaints having been lately made about the unpunctuality of

the trains. It was supposed to be the station-master's fault, and that these officials, being slack in the performance of their duty, were the main cause of the delay. "I could easily find them out," remarked the inspector, "if it were not for the confounded telegraph, but that beats me; for the rogues are all in collusion the one with the other, and as soon as ever they see me on the platform they telegraph the intelligence to their brethren down the line."

It appeared that there used formerly to be a great deal of fraud committed on the railway companies in Russia by the guards of the trains, who would ask a passenger, when about to take his ticket at the booking-office, "What class are you going by?" If by the first or second, the guard would say, "Take a third-class ticket; give me a few rubles, and I will let you go first-class, as I am guard of the train by which you will travel." But, according to the inspector, this system of roguery has now been put down, and the result is a better return on the railway capital, although up to the present time the lines have been anything but remunerative to investors. From the inspector I found out that I ought to have taken my ticket to Sizeran, which was the terminus of the line in the direction of Orenburg, but that it was too late now to pay the difference, and that I must wait till we arrived at Penza, when I should just have time to get a new ticket, and re-label my luggage.

It was a bitter cold night, in spite of all our furs, and at Riayan, where it was necessary to wait an hour, and to change trains, a fellow-traveler, a Russian nobleman, who had got into the carriage at an intermediate station, was very indignant with the stoker whose business it was to keep up the fire, and repeatedly called him the son of an animal, the culprit trembling and crying out as if he were under the lash of a whip.

It will take a good many years thoroughly to eliminate the old spirit of serfdom in Russia, although the law has long ceased to exist, and the men who have been brought up as slaves find it difficult to get rid of a feeling of awe when they are in the presence of their superiors. Perhaps it

is as well that things follow on in this groove, for it would be a bitter day for Russia should the Socialistic and Nihilist tendencies which are being developed in her larger towns become extended amidst her rural population. At the present moment the love for the emperor predominates over every feeling but one amidst the peasantry; and this devotion to their Father, as he is termed, is well deserved, for the Emperor Alexander underwent an enormous personal risk when, at one stroke of the pen, he did away with slavery in his dominions. It was a step which required great moral courage on the part of its originator, and few emperors would have risked mortally offending the upper classes of the country, even to do an act of justice to the lower.

Probably the only influence which could be brought to bear upon a peasant's mind, to such an extent that I believe it would counterbalance his affection for the Tsar, is the religious one. In perhaps no country in the world has this element so powerful a sway as in Russia. In religion, coupled with superstition, lay a power which could even thwart the wishes of the Emperor Nicholas himself; and the ecclesiastical hierarchy is certainly more powerful than the Tsar. Hitherto the two dominant influences have gone hand-in-glove together; and it is as well that it should be so, for any rupture between them would inevitably lead to a revolution.

In the waiting-room at Riajsk waiters were hurrying about with glasses of scalding tea, which were eagerly called for by the traveler. In fact, the amount of this beverage that a Russian can drink is somewhat astonishing to the stranger; and the traditional washerwoman of our country, whose capabilities in this respect are supposed to be unrivaled, would have no chance whatever if pitted against a subject of the Tsar. A large *samovar* (a brass urn) stood on the refreshment table, the water being kept to boiling-point, not by a funnel as in England, but by a funnel which fitted into the center of the urn, and was filled with red-hot charcoal. Economy was evidently the order of the day with some of the travelers; for instead of putting the sugar into their

glasses, they would take a lump in their mouths, and thus sweeten the scalding draught.

I took advantage of our delay at Riajsk, and walked through the other waiting-rooms. These were crammed with third-class passengers. It was a strange sight to see the mixture of different nationalities, which, huddled together like sheep, lay in different attitudes on the floor. Here a Tartar merchant, his head covered with a small yellow fez, while a long parti-colored gown and a pair of high boots completed his attire, was fast asleep in a corner. A woman, her face covered with a thick white veil, lay folded in his arms; while a child, enveloped in a bundle of rags, was playing with the fur cap of its parent. Next to them a man, whose peculiarly-shaped nose showed a distinct relationship to the tribe of Israel, was breathing hard through his nasal organ. From time to time he clutched convulsively at a small leather bag, which, half hidden beneath a greasy-looking black coat, was, even in his dreams, a source of anxiety. Peasants in every posture, their well-knit frames clad in untanned leather, which was tightly girt about their loins with narrow leather belts, studded with buttons of brass and silver, reëchoed the Hebrew's melody. An old Bokharan, in flowing robes, sat listlessly, with his legs twisted up under him, beside the stove. He appeared to be under the influence of opium, and was possibly dreaming of celestial houris and bliss to come; while a smart-looking lad —perhaps his son, judging from the likeness between them —had withdrawn a little from the rest of the throng, apparently not very well pleased by his vicinity to the Russian peasants.

The Mohammedans of Central Asia have certainly one great advantage over the Moujik, and that is their love for water; indeed, if the Russian peasant could only be persuaded to be a little more particular in his ablutions, it would be conducive, if not to his own comfort, at least to that of his fellow-travelers. Superstition and dirt are twin-brothers in Russia, and I have frequently observed that the more particular a peasant is in his adoration of the various idols

(*obrazye*), which are prominently displayed on the threshold of every cottage, the more utterly he is forgetful of the advantages of soap and water.

At Penza I had barely time to secure another ticket on to Sizeran, where my railway traveling would terminate, and presently found myself in a large saloon carriage. Here almost every seat was taken, and the porters had piled upon them some railway bags and parcels belonging to passengers traveling in another carriage. These articles had been put in while the owners were in the waiting-rooms, the object being to diminish the length of the train. This was attained, but at the cost of considerable discomfort to the travelers, who were eagerly searching for their lost property by the dim light of a smoky tallow-dip.

In the course of conversation with one of the party, a tall and very stout middle-aged man, I discovered that my shortest route to Orenburg would be through Samara. He said that he was going to the last-mentioned town, and proposed that we should hire a *troika*—a three-horse sleigh—and travel together. I readily embraced the offer, when, after a few hours' more traveling, we stepped out on the platform of the station at Sizeran. Here my companion was evidently well known, for the railway officials and porters respectfully saluted him, and hastened to bring our luggage to the waiting-room. I must say that I was surprised to find so good a refreshment-room so far from the capital, as, with but very short halts for the purpose of changing trains, we had been traveling for more than sixty hours, and all this time in the direction of Asia, on nearing which you expect at each stride to leave civilization farther and farther in your wake. But the buffet at Sizeran left nothing to be desired; and, in a very short time, as good a breakfast was supplied as could be obtained in any French restaurant.

We now had to think over the preparations for our sleigh journey, and, after a little bargaining, my companion made arrangements with a farmer in the neighborhood to supply us with a sleigh and relays of horses as far as Samara. The

distance is about eighty-five miles, and there is no regular government postal station between the two towns.

"You had better put on plenty of clothes," was the friendly caution I received from my companion as I entered the dressing-room, "for the thermometer marks twenty degrees below zero (Reaumur), and there is a wind." People in this country who have never experienced a Russian winter have little idea of the difference even a slight breeze makes when the mercury stands low in the thermometer, for the wind then cuts through you, furs and all, and penetrates to the very bones. Determining to be on my guard against the frost, I dressed myself, as I thought, as warmly as possible, and so as to be utterly impervious to the elements.

First came three pairs of the thickest stockings, drawn up high above the knee, and over them a pair of fur-lined low shoes, which in their turn were inserted into leather galoshes, my limbs being finally deposited in a pair of enormous cloth boots, the latter reaching up to the thigh. Previously I had put on some extra thick drawers and a pair of trousers, the astonishment of the foreman of Messrs. Kine's establishment. "Lord love you, sir," being his remark when I tried them on, "no cold can get through them trousers, anyhow!" I must confess that I rather chuckled as my legs assumed herculean proportions, and I thought that I should have a good laugh at the wind, no matter how cutting it might be; but Æolus had the laugh on his side before the journey was over. A heavy flannel undershirt, and shirt covered by a thick wadded waistcoat and coat, encased my body, which was further enveloped in a huge *shuba*, or fur pelisse, reaching to the heels, while my head was protected by a fur cap and *vashlick*, a sort of cloth head-piece, of a conical shape, made to cover the cap, and having two long ends which tie round the throat.

Being thus accoutered in all my armor, I sallied forth to join my companion, who, an enormous man naturally, now seemed a very Colossus of Rhodes in his own winter attire. How people would have laughed if they could have seen us

in Piccadilly in our costumes! "I think you will do," said my friend, scanning me well over; "but you will find your feet get very cold, for all that. It takes a day or so to get used to this sleigh traveling; and though I am only going a little beyond Samara, I shall be uncommonly glad when my journey is over."

He was buckling on his revolver; and as we were informed that there were a great many wolves in the neighborhood, I tried to do the same; but this was an impossibility. The man who made the belt had never foreseen the gigantic proportions my waist would assume when clad in this Russian garb. I was obliged to give it up in despair, and contented myself by strapping the weapon outside my saddle-bags.

For provisions for possibly a thirty-six hours' journey, and as nothing could be bought to eat on the road, I provided myself with some cutlets and chicken, which fitted capitally into the mess-tins, while my companion agreed to furnish the tea and bread, the former an article without which no true Russian will ever travel. He had not much baggage with him, and my own was reduced to as little as possible; but we soon discovered that it was impossible to stow away the luggage in the first sleigh that had been brought for our inspection, for when my railway-bag, saddle-bags, cartridge-box, gun, and sleeping-sack had been put inside, and were well covered with straw, I essayed to sit upon them, but found that there was too little distance from the improvised seat to the roof, and my back was nearly bent double in consequence.

"Bring out another sleigh," said my friend. "How the wind cuts! does it not?" he continued, as the breeze, whistling against our bodies, made itself felt in spite of all the precautions we had taken. The vehicle now brought was broader and more commodious than the previous one, which, somewhat in the shape of a coffin, seemed specially designed so as to torture the occupants, particularly if, like my companion and self, they should happen to be endowed by nature with that curse during a sleigh journey—however

desirable appendages they may be when in a crowd—long legs. Three horses abreast, their coats white with pendant icicles and hoar-frost, were harnessed to the sleigh; the center animal was in the shafts, and had his head fastened to a huge wooden head-collar, bright with various colors. From the summit of the head-collar was suspended a bell, while the two outside horses were harnessed by cord traces to splinter-bars attached to the sides of the sleigh. The object of all this is to make the animal in the middle trot at a brisk pace, while his two companions gallop, their necks arched round in a direction opposite to the horse in the center, this poor beast's head being tightly reined up to the head-collar.

A well-turned-out *troika*, with three really good horses, which get over the ground at the rate of twelve miles an hour, is a pretty sight to witness, particularly if the team has been properly trained, and the outside animals never attempt to break into a trot, while the one in the shafts steps forward with high action; but the constrained position in which the horses are kept must be highly uncomfortable to them, and one not calculated to enable a driver to get as much pace out of his animals as they could give him if harnessed in another manner.

Off we went at a brisk pace, the bell dangling from our horse's head-collar, and jingling merrily at every stride of the team.

The sun rose high in the heavens. It was a bright and glorious morning in spite of the intense cold, and the amount of oxygen we inhaled was enough to elevate the spirits of the most dyspeptic of mankind. Presently, after descending a slight declivity, our Jehu turned sharply to the right; then came a scramble, and a succession of jolts and jerks, as we slid down a steep bank, and we found ourselves on what appeared to be a broad high-road. Here the sight of many masts and shipping which, bound in by the iron fetters of a relentless winter, would remain imbedded in the ice till the ensuing spring, showed me that we were on the Volga. It was an animated spectacle, this frozen highway,

thronged with peasants, who strode beside their sledges, which were bringing cotton and other goods from Orenburg to the railway. Now a smart *troika* would dash by us, its driver shouting as he passed, when our Jehu, stimulating his steeds by loud cries and frequent applications of the whip, would vainly strive to overtake his brother coachman. Old and young alike seemed like octogenarians, their short, thick beards and mustaches being white as hoar-frost from the congealed breath. According to all accounts the river had not been long frozen, and till very recently steamers laden with corn from Southern Russia had plied between Sizeran and Samara. The price of corn is here forty copecks the pood of forty pounds, while the same quantity at Samara could be purchased for eighteen copecks. An iron bridge was being constructed a little farther down the Volga. Here the railroad was to pass, and it was said that in two years' time there would be railway communication, not only between Samara and the capital, but even as far as Orenburg.

Presently the scenery became very picturesque as we raced over the glistening surface, which flashed like a burnished cuirass beneath the rays of the rising sun. Now we approach a spot where seemingly the waters from some violent blast or other had been in a state of foam and commotion, when a stern frost transformed them into a solid mass. Pillars and blocks of the shining and hardened element were seen, modeled into a thousand quaint and grotesque patterns. Here a fountain, perfectly formed, with Ionic and Doric columns, was reflecting a thousand prismatic hues from the diamond-like stalactites which had attached themselves to its crest. There a huge obelisk, which, if of stone, might have come from ancient Thebes, lay half-buried beneath a pile of fleecy snow. Farther on we came to what might have been a Roman temple or vast hall in the palace of a Cæsar, where many half-hidden pillars and monuments erected their tapering summits above the piles of the débris. The wind had done in that northern latitude what had been performed by some violent pre-Adamite agency in the Ber-

ber desert. Take away the ebon blackness of the stony masses which have been there cast forth from the bowels of the earth, and replace them on a smaller scale by the crystal forms I have faintly attempted to describe, and the resemblance would be striking.

. . . . . .

We were now fast nearing Khiva, which could be just discerned in the distance, but was hidden, to a certain extent, by a narrow belt of tall, graceful trees; however, some richly-painted minarets and high domes of colored tiles could be seen towering above the leafy groves. Orchards, surrounded by walls eight and ten feet high, continually met the gaze, and avenues of mulberry trees studded the landscape in all directions.

The two Khivans rode first; I followed, having put on my black fur pelisse instead of the sheepskin garment, so as to present a more respectable appearance on entering the city. Nazar, who was mounted on the horse that stumbled, brought up the rear. He had desired the camel-driver to follow in the distance with the messenger and the caravan, my servant being of opinion that the number of our animals was not sufficient to impress deeply the Khivans with my importance, and that on this occasion it was better to ride in without any caravan than with the small one I possessed. We now entered the city, which is of oblong form, and surrounded by two walls; the outer one is about fifty feet high; its basement is constructed of baked bricks, the upper part being built of dried clay. This forms the first line of defense, and completely encircles the town, which is about a quarter of a mile within the wall. Four high wooden gates, clamped with iron, barred the approach from the north, south, east, and west, while the walls themselves were in many places out of repair.

The town itself is surrounded by a second wall, not quite so high as the one just described, and with a dry ditch, which is now half filled with ruined débris. The slope which leads from the wall to the trench had been used as a cemetery, and hundreds of sepulchers and tombs were scat-

tered along some undulating ground just without the city. The space between the first and second walls is used as a market-place, where cattle, horses, sheep, and camels are sold, and where a number of carts were standing, filled with corn and grass.

Here an ominous-looking cross-beam had been erected, towering high above the heads of the people with its bare, gaunt poles.

This was the gallows on which all people convicted of theft are executed; murderers being put to death in a different manner, having their throats cut from ear to ear in the same way that sheep are killed.

This punishment is carried out by the side of a large hole in the ground, not far from the principal street in the center of the town. But I must here remark that the many cruelties stated to have been perpetrated by the present khan previous to the capture of his city did not take place. Indeed, they existed only in the fertile Muscovite imagination, which was eager to find an excuse for the appropriation of a neighbor's property. On the contrary, capital punishment was inflicted only when the laws had been infringed; and there is no instance of the khan having arbitrarily put any one to death.

The two walls above mentioned appear to have made up the defenses of the city, which was also armed with sixteen guns. These, however, proved practically useless against the Russians, as the garrison fired only solid shot, not being provided with shell. The khan seemed to have made no use whatever of the many enclosed gardens in the vicinity of the city during the Russian advance, as, if he had, and firmly contested each yard of soil, I much doubt whether the Tsar's troops could have ever entered the city.

It is difficult to estimate the population of an Oriental city by simply riding around its walls; so many houses are uninhabited, and others again are densely packed with inhabitants. However, I should say, as a mere guess, that there are about 25,000 human beings within the walls of Khiva. The streets are broad and clean, while the houses

belonging to the richer inhabitants are built of highly polished bricks, and colored tiles, which lend a cheerful aspect to the otherwise somewhat somber color of the surroundings. There are nine schools; the largest, which contains one hundred and thirty pupils, was built by the father of the present khan. These buildings are all constructed with high, colored domes, and are ornamented with frescos and arabesque work, the bright aspect of the cupolas first attracting the stranger's attention on his nearing the city.

ASIA

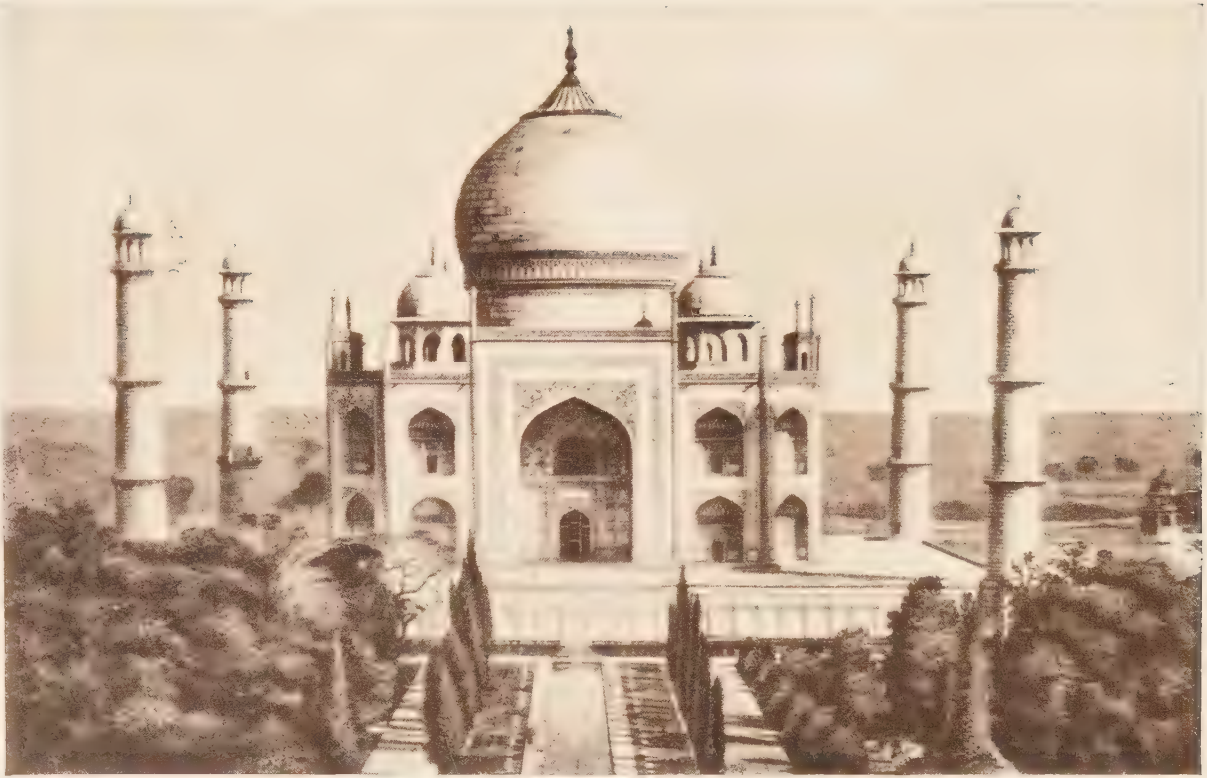
The Taj Mahal

By JOSEPH MOORE

DELHI, the capital of the extinct Mogul Empire, is the Mecca of the East. What a train of thought is suggested by its very name! With a history dating back to the mythical period of the early Aryans, it was destroyed seven times and as often rose again to dominion and grandeur.

Here the Pathans of Ghuzni, under Mohammed Ghery, founded (A. D. 1193) the Moslem empire of India, and two centuries later (1398) the ruthless Tamerlane came with his fanatical hordes to burn, plunder, and drench the streets with blood. Next the Sultan Baber, the descendant of Zhenghis Khan and Tamerlane, crossed the Indus and established the Mogul throne (1526) in the conquered city. This memorable dynasty continued to flourish, with only one interruption, and with increasing luster, for a hundred and eighty years, under a succession, unprecedented in Indian history, of six sovereigns distinguished by their gallantry in the field, and, with one exception, by their ability in the cabinet.

This galaxy of successful though cruelly rapacious and utterly unprincipled rulers consists of Baber, Humayoon, Akbar, Jehangeer, Shah Jehan, and Aurungzebe. About these names cluster the relics of the power and splendor of the Great Moguls, the superb monuments of dazzling extravagance by which travelers are chiefly drawn to the imperial seats of Delhi and Agra.



THE TAJ MAHAL.

Modern Delhi is the work of the Emperor Shah Jehan (1627-1658), a monarch celebrated for the splendor of his tastes, for the order of his finances, and for his love of building. As the new city approached completion he left Agra, whither the great Akbar had removed his court, and Delhi again became the Mogul capital.

The fort, or citadel—which contains the palace, now partly destroyed, the exquisite marble gem known as the Pearl Mosque, the luxurious baths, and the lavish pavilions of state—is the finest in India. Its gateways are in themselves imposing structures, and the lofty castellated walls of red sandstone describe a circuit of more than a mile. Within the enclosure of the city are the famous shalimar gardens, now called the Queen's, beyond which the inmates of the zenana, or harem, never passed. The culmination of all this magnificence is reached in the Dewan-i-Khas, or Hall of Private Audience, which overlooks the river Jumna and the plain. This edifice is of marble, open at the sides, and supported by massive square columns, the whole being adorned with mosaics of costly stones and inlaid gold. Adjoining it are the private apartments of the sovereign, where the pierced marble screens, wrought in floral designs, are of startling richness.

In this hall stood the renowned Peacock Throne, which was plundered by the Persians, a mass of solid gold flanked by two peacocks with distended tails, all studded with diamonds and rubies, sapphires, emeralds and pearls. The value of this wonder was estimated at six crores, or sixty millions of rupees, nominally thirty millions of dollars.

On the cornices of the marble platform which bore the throne is the Persian inscription which Thomas Moore introduced so effectively in "The Light of the Harem":

> "And, oh, if there be an Elysium on earth,
> It is this, it is this."

Shah Jehan was not long permitted to enjoy the grandeur he had created. During an illness which brought him to the point of death, his four sons became involved in a bitter conflict for the succession; and so far had it been carried by

the time of his recovery that he was unable to resume his authority. The bold and subtle Aurungzebe overpowered all resistance, dethroned his father, and imprisoned the fallen monarch in the fort at Agra. There he spent the remaining seven years of his life, within sight of that sublime mausoleum, the Taj, which he had reared to the memory of the adored wife of his youth.

Despite this heartless act, to which he added the death of his brothers, Aurungzebe lived to reign almost half a century (1658-1707), and to wage a war of intolerance for twenty-five years. But the close of his career was tortured by suspicion, gloom, and remorse, and after his death the strained empire began to decline.

Lalla Rookh was the daughter of this cruel prince, and it was from the gate of the fort, already noticed, that she set out upon the journey to reach her future husband in the Vale of Cashmere. The day of her "departure was as splendid as sunshine and pageantry could make it. The bazaars were all covered with the richest tapestry, hundreds of gilded barges upon the Jumna floated with their banners shining in the water, while through the streets groups of children went strewing the most delicious flowers around. And as Aurungzebe stood to take a last look from his balcony, the procession moved slowly on the road to Lahore."

Although Ireland's sweetest lyrist never visited the East, the scene he pictures may have been enacted at Delhi a century before his generation. But if his studies of forgotten writers have not prompted him to exaggerate, as in many instances, how completely has everything changed! Not a shred of the pomp he sketches is now to be seen. . . . Delhi is yet the revered center of the forty millions of Moslems in India. Their cathedral mosque, the Jumna Musjid, is the most imposing religious edifice in the Peninsula. It is built of red stone, and stands on an elevated terrace, approached by a lofty flight of steps. Upon passing any of the three gates we enter an immense paved quadrangle, with a marble reservoir in the middle, and surrounded by a cloistered colonnade.

The mosque itself, on the western side of the inclosure, is surmounted by three bulbous domes of white marble, flanked by two high minarets constructed of alternate vertical stripes of marble and red sandstone. "The whole," says Fergusson, "forms a group intelligible at the first glance, and, as an architectural object, possesses a variety of outline and play of light and shade which few buildings can equal." . . .

Delhi has now less than 200,000 population, but it once had almost 2,000,000. The remains of the cities which preceded the present one are strewn in profusion over the neighboring plain, covering a distance of nearly sixty square miles. Temples and mosques, tombs and palaces, walls and forts, are here crumbling and falling unheeded and deserted.

In the midst of this decay is the magnificent Kootub Minar, the loftiest independent tower on the globe, excepting the Washington Monument. Although it has stood nearly seven hundred years, time has scarcely marred this noble achievement of Pathan architecture, unquestionably one of the wonders of the mediæval world. It far surpasses either the Campanile of Florence or the Giralda of Seville, while the tower of the Kremlin, probably the highest in Europe, is unworthy of comparison, because of its inferior construction.

We spent two days in exploring this vast area of ruins, and marveled at the infinite waste which man has committed in the name of religion and through vain efforts to perpetuate his own memory. The moral of this sumptuous wreck, the fabrics of wealth wrung from the poor, is written in the eternal law of nations that the era of luxury is the herald of decline. A conquered race, dragging out a most abject existence, peoples this land of fabled riches, and the vacant thrones of the tyrant Moguls, symbols of a "Paradise lost," stand in the gorgeous halls of state, waiting for Old Mortality to inscribe them with the words of Milton—

"They themselves ordained their fall."

As we rolled away from Delhi and crossed the Jumna

bridge, the young crescent faintly illuminated the snowy domes of the immaculate Pearl Mosque. In the distance we could distinguish the tall memorial column on the commanding ridge from which British guns thundered their command to the mutineers to yield the stolen city. When the train halted for a moment on the bridge, we caught the martial notes of the English bugler within the embattled citadel of the splendor-loving Shah Jehan. The exquisite marble balcony, in which the Great Moguls sat to review their legions, was vacant, and the parade-plain beneath as silent and peaceful as the shallow, winding Jumna.

Lahore, the present capital of the Punjaub, holds an important place in Mogul history, and the plain which surrounds it, like that of Delhi, is marked with the ruins of its departed greatness. It was the chosen residence of the Emperor Jehangeer, whose splendid mausoleum, richly decorated with mosaics, stands on the opposite banks of the river Ravee from the city. Before his accession to the throne this prince was called Selim, the name under which he appears in "Lalla Rookh" as the estranged lover of Noor Mahal, the "Light of the Harem." But history presents a different story of this couple from that woven by the poet's fancy. Jehangeer, who was a drunkard and of cruel instincts, already had four wives when he fell in love with the beautiful Noor Mahal. She was the daughter of a Persian adventurer named Itmadood-Dowlah, who afterward became prime minister of the empire. The great Akbar, father of the prince, interfered and dispatched the girl to Bengal, where she married one Sher Ufgun.

When Akbar died, Jehangeer sent for the object of his affection. Her husband naturally objected to the transfer, so he was put to the sword to remove the difficulty. The lady was then brought to Agra, where the Emperor awaited her, but she indignantly refused his advances. This was the "something light as air" which Moore, with rosy imagination, has transformed into a mere lovers' tiff, upon the occasion of the Feast of Roses in the Shalimar Gardens at Cashmere.

The lady's ambition, however, shortly allayed her scornful anger and obscured the memory of her murdered husband. She wedded the sanguinary suitor, and was raised to the throne as the favorite Empress. At this time she was a woman of middle age. In addition to these realisms, the veil of romance in which Moore has enveloped her is further rent by the fact that she was a virago, and given to unscrupulous political intrigue.

On the other hand, it must be stated that husband and wife were very devotedly attached to each other. When the Emperor died he was profoundly mourned by Noor Mahal, who reared the costly tomb in which she was afterwards laid by his side. . . .

One relic of that storied past yet exists in all its luxurious beauty—Shah Jehan's House of Joy, the Shalimar Gardens. We wandered through the orange groves and erotic retreats of this elysium, picturing in our imagination the days of history and of song, when the marble pavements were trodden by the houris of the zenana, and the five hundred fountains, strung in endless vista, terrace upon terrace, threw their sparkling jets into the sunshine to greet the august presence of the Great Mogul.

When we arrived at Agra the great Mohammedan festival of the Moharram was at its height. In the bazaars, the shops of the Moslems and of many of the Hindoos were closed, and the streets thronged with people in gay holiday attire. Nautch girls, wives, and daughters, all decked with the showy trinkets of the East, filled the windows and balconies, waiting for the culminating pageant of the day. As the procession approached, the crowd surged toward its head, and the excitement became intense. . . .

Agra is essentially a Mogul city, and nowhere are the wealth and splendor of that oppressive dynasty evinced to a greater degree than in its sumptuous monuments. Here Akbar located his capital and built the imposing citadel which overhangs the Jumna. Within its crenelated walls, a mile and a half in circuit, stand the architectural gems, some in a condition of ruin, which attest the magnificence of

the imperial court. After passing the massive gate-way of the inclosure, itself a fortress, and crossing a garden, we come to the Hall of Public Audience. Next we enter the zenana, where the beauty of the East was once gathered, and then the luxurious baths, all lavishly adorned, which resemble the cool retreats and sprinkling fountains of the Alhambra. One of these chambers and its passages, called the Palace of Glass, are decorated with little mirrors, similar to the room at Ambher.

The Hall of Private Audience consists of two pavilions, smaller than the one at Delhi and more of the Hindoo style, but almost as richly finished. Here we found the Black Throne of Akbar, upon which we coiled ourselves in Oriental fashion, without, however, feeling like a Great Mogul.

Then follow the elegant private apartments of the Emperor, and pavilions, kiosks, and balconies overlooking the river, seventy feet below, all of snowy marble, with exquisite fretted lattices of the same material and inlaid with mosaics of precious stones.

Near by is the immaculate Pearl Mosque, which is much larger than its queenly namesake at Delhi. Although purely Saracenic in style, this edifice depends for its exalted effect upon absolute simplicity of outline and graceful proportion, eschewing almost all ornament. The whole is of white marble, from the pavement of the court to the three crowning domes, "silvery bubbles which have rested a moment on its walls, and which the next breeze will sweep away."

Even while the Fort was in process of construction, Akbar was engaged in rearing a stupendous summer establishment about twenty miles from Agra.

The ruins of this city, for such it is, are within a walled park, seven miles in circumference, embracing the present villages Fullehpur and Sikri. The plateau of a long, rocky hill, in the center of the inclosure, was selected for the court, and upon this site arose a prodigal array of stately piles. Red sandstone is the prevailing material, but consid-

erable marble was also used. Many of these structures are yet intact, while others exist in a state of partial decay.

According to the statements of early travelers, Akbar once intended this "most noble city" for his seat of government. Scarcely, however, was it completed before he quitted the place for sanitary reasons. Palaces and mosques, zenanas and baths, walls and towers, tombs and gate-ways, pavilions, courts, and halls, built with the money and the labor of his subjects, were thus abandoned to neglect and decline.

This transitory paradise seems to have owed its creation to the advice of a fakir, or holy mendicant, named Shekh Selim—whose marble tomb stands in the quadrangle of the mosque—to commemorate the birth of the child that became the Emperor Jehangeer. Legend has interwoven its story with the history of this event, but in whatever light it may be viewed, we must conclude that Akbar either abetted a fraud or yielded to the baldest superstition.

But with all his faults Akbar was the greatest prince that ever sat on the throne of the Moguls. Although constantly at war, he never lost a battle. During his reign the dominion of the empire was vastly extended, and wise reforms were successfully introduced. While a Mohammedan by birth and education, he was tolerant of all religions. At one time he inclined to a belief in Christ, when he married the alleged Christian lady, the Miriam of Whittier's exquisite poem, whose tomb is pointed out near his own superb mausoleum at Secundra, a short drive from Agra. He invited Hindoos to accept civil and military offices, and chose two wives of that faith.

Akbar's efforts to establish religious equality led him to devise an eclectic creed, which sought to unite the followers of Christ, of Zoroaster, of Brahma, and of Mohammed. In this impossible task he naturally encountered failure, and the abnormal system died with its founder.

Every department of his court was sustained upon a scale of splendor before unknown in India. Under him and his successors Agra blended the magnificence of the palaces of

Nineveh and the temples of Babylon with the enchantments of the sylvan elysium of Cashmere.

Yet after the recital of all this wondrous grandeur the crowning glory of Agra and of India remains to be told. The incomparable Taj Mahal, that peerless marvel of love, of skill, of patience, of beauty, of treasure, and of power; the faultless, dazzling mausoleum which Shah Jehan raised to the memory of his beautiful idolized consort, in accordance with a promise made beside her death-bed. As a last request she begged of him a memorial befitting a queen. In response he vowed to rear above her remains a sepulcher that the world should hold matchless.

More than two centuries have elapsed since this shrine of affection was completed. Attracted by its fame, in that period travelers from every clime have journeyed to Agra to behold the jeweled wonder. Man is critical either from instinct or pedantry, but not a single voice has yet denied that Shah Jehan has redeemed the fullest measure of his pledge. . . .

Entering a magnificent gate-way, we find ourselves in a garden which rivals the charms of Shalimar. Before us stretches a lengthy avenue of the trembling cypress, along the middle of which a row of fountains toss their slender jets high into the stilly air—a superb vista, a third of a mile long. At the extreme end, partially obscured by the abundant foliage, rises the Taj, so white and dazzling that it seems to be the source of the sunlight which crowns it like an aureole.

Approaching it, we mount a broad terrace of red sandstone, upon which are two mosques of the same material, one on each side. From this base we ascend to a smaller platform of polished marble, whereon four towering minarets, snowy and graceful, dart upward from the corners. In the center of this fitting pedestal stands the Taj, radiant and of spotless white.

The edifice is square, but as the corners are truncated it might also be called octagonal. Surmounting it is a symmetrical, bulbous dome, flanked by four lesser bulbs raised

BUDDHIST PRIESTS

on delicate pavilions. A lofty arched entrance and twin pairs of smaller arches pierce each of the four identical *façades*, adding an air of lightness and plasticity to faultless proportions.

The walls of the exterior, not less than within, are lavishly embellished with inlaid vines and flowering texts from the Moslem scriptures. Indeed, it is credibly stated that the entire Koran is thus placed upon the mausoleum. Everywhere the finish is like that of a jewel-case, in supreme forgetfulness of toil or treasure.

We enter the rotunda, and stand thrilled by a beauty and solemnity which pass all expression. Lost in admiration, we unconsciously speak, and instantly the guardian Echo catches up the note and carries it round and round the lofty vault, calling it back softer and softer, as if not to wake the dead, until it fades into profound silence. Windows of marble lace temper the light within, harmonizing it with the religious sentiment which pervades the tomb.

Directly beneath the dome is the cenotaph of the Empress, covered with mosaics of flowers and foliage, wrought in turquoise and jasper, carnelian and sard, chalcedony and agate, lapis lazuli and jade, blood-stone onyx and heliotrope. Beside it is that of the Emperor, similarly adorned. Surrounding them is a screen of marble filigree elaborate and delicate beyond all conception.

In a vault below the central hall is the inlaid sarcophagus which contains the ashes of the lady of the Taj— Moontaz-i-Mahal, the Exalted One of the Harem. There, also, close to the bride of his youth, rests the faithful Shah Jehan. Deathless love joined forevermore.

We came by moonlight to this sanctuary, when all was silent save the rippling of the Jumna, which flows by its side; and, walking around the shimmering pile, confessed that "the rare genius of the calm building finds its way unchallenged to the heart."

ASIA

Sacred Haunts of Palestine

By A. W. KINGLAKE

WE crossed the Golden Horn in a caïque. As soon as we had landed, some woebegone-looking fellows were got together and laden with our baggage. Then on we went, dripping and sloshing, and looking very like men that had been turned back by the Royal Humane Society for being incurably drowned. Supporting our sick, we climbed up shelving steps, and threaded many windings, and at last came up into the main street of Pera, humbly hoping that we might not be judged guilty of the plague, and so be cast back with horror from the doors of the shuddering Christians.

Such was the condition of the little troop which fifteen days before had filed away so gayly from the gates of Belgrade. Two attacks of fever and a northeasterly storm had thoroughly spoiled our looks.

The interest of Mysseri with the house of Giuseppini was too powerful to be denied, and at once, though not without fear and trembling, we were admitted as guests.

Even if we don't take a part in the chant about "mosques and minarets," we can still yield praises to Stamboul. We can chant about the harbor; we can say and sing that nowhere else does the sea come so home to a city; there are no pebbly shores—no sand-bars—no slimy river-beds—no black canals—no locks nor docks to divide the very heart of the place from the deep waters. If, being in the noisiest

mart of Stamboul, you would stroll to the quiet side of the way amidst those cypresses opposite, you will cross the fathomless Bosporus; if you would go from your hotel to the bazaars, you must pass by the bright blue pathway of the Golden Horn, that can carry a thousand sail of the line. You are accustomed to the gondolas that glide among the palaces of St. Mark, but here, at Stamboul, it is a hundred-and-twenty-gun ship that meets you in the street. Venice strains out from the steadfast land, and in old times would send forth the Chief of the State to woo and wed the reluctant sea; but the stormy bride of the Doge is the bowing slave of the Sultan—she comes to his feet with the treasures of the world—she bears him from palace to palace—by some unfailing witchcraft she entices the breezes to follow her, and fan the pale cheek of her lord—she lifts his armed navies to the very gates of his garden—she watches the wall of his Serail—she stifles the intrigues of his Ministers—she quiets the scandals of his Court—she extinguishes his rivals, and hushes his wives all one by one. So vast are the wonders of the deep!

I caught one glimpse of the old heathen world. My habits of studying military subjects had been hardening my heart against poetry. Forever staring at the flames of battle, I had blinded myself to the lesser and finer lights that are shed from the imaginations of men. In my reading at this time, I delighted to follow from out of Arabian sands the feet of the armed believers, and to stand in the broad manifest storm-tract of Tartar devastation and thus, though surrounded at Constantinople by scenes of much interest to the classical scholar, I had cast aside their associations like an old Greek grammar, and turned my face to the "shining orient," forgetful of old Greece, and all the pure wealth she left to this matter-of-fact-ridden world. But it happened to me one day to mount the high grounds overhanging the streets of Pera. I sated my eye with the pomps of the city and its crowded waters, and then I looked over where Scutari lay half veiled in her mournful cypresses. I looked yet farther, and higher, and saw in the heavens a

silvery cloud that stood fast and still against the breeze; it was pure and dazzling white as might be the veil of Cytherea, yet touched with such fire, as though from beneath the loving eyes of an immortal were shining through and through. I knew the bearing, but had enormously misjudged its distance and underrated its height, and so it was as a sign and a testimony—almost as a call from the neglected gods, that now I saw and acknowledged the snowy crown of the Mysian Olympus!

I crossed the plain of Esdraelon, and entered among the hills of beautiful Galilee. It was at sunset that my path brought me sharply around into the gorge of a little valley, and close upon a gray mass of dwellings that lay happily nestled in the lap of the mountain. There was only one shining point still touched with the light of the sun, who had set for all besides; a brave sign this to "holy Shereef," and the rest of my Moslem men; for the one glittering summit was the head of a minaret, and the rest of the seeming village that had veiled itself so meekly under the shades of evening was Christian Nazareth.

Within the precincts of the Latin convent there stands the great Catholic church which encloses the sanctuary—the dwelling of the blessed Virgin. This is a grotto of about ten feet either way, forming a little chapel or recess, and reached by descending steps. It is decorated with splendor; on the left hand a column of granite hangs from the top of the grotto to within a few feet of the ground; immediately beneath, another column of the same size rises from the ground as if to meet the one above; but between this and the suspended pillar there is an interval of more than a foot. These fragments once formed the single column on which the angel leant when he spoke and told to Mary the mystery of her awful blessedness. Hard by, near the altar, the holy Virgin was kneeling.

I had been journeying, cheerily indeed, for the voices of my followers were ever within my hearing, but yet, as it were, in solitude, for I had no comrade to whet the edge of my reason, or wake me from my noonday dreams. I was

left all alone to be taught and swayed by the beautiful circumstances of Palestine traveling—by the clime, and the land, and the name of the land, with all its mighty import —by the glittering freshness of the sward, and the abounding masses of flowers that furnished my sumptuous pathway —by the bracing and fragrant air that seemed to poise me in my saddle, and to lift me along as a planet appointed to glide through space.

And the end of my journey was Nazareth—the home of the blessed Virgin! In the first dawn of my manhood the old painters of Italy had taught me their worship of the beauty that is more than mortal; but those images all seemed shadowy now, and floated before me so dimly, the one overcasting the other, that they left me no one sweet idol on which I could look, and look again, and say, "Maria mia!" Yet they left me more than an idol—they left me (for to them I am wont to trace it) a faint apprehension of beauty not compassed with lines and shadows—they touched me (forgive, proud Marie of Anjou!), they touched me with a faith in loveliness transcending mortal shapes.

I came to Nazareth, and was led from the convent to the sanctuary. . . . so as I went, I trod tenderly, not looking to the right nor to the left, but bending my eyes to the ground.

The attending friar served me well—he led me down quietly, and all but silently, to the Virgin's home. The mystic air was so burnt with the consuming flames of the altar, and so laden with incense, that my chest labored strongly and heaved with luscious pain. There—there with beating heart the Virgin knelt, and listened; I strove to grasp and hold with my riveted eyes some one of the feigned Madonnas; but of all the heaven-lit faces imagined by men, there was none that would abide with me in this the very sanctuary. Impatient of vacancy, I grew madly strong against nature; and if by some awful spell, some impious rite, I could— Oh, most sweet religion, that bid me fear God, and be pious, and yet not cease from loving! Religion and gracious custom commanded me that I fall down loyally,

and kiss the rock that blessed Mary pressed. With a half consciousness—with the semblance of a thrilling hope that I was plunging deep, deep into my first knowledge of some most holy mystery, or of some new, rapturous, and daring sin, I knelt, and bowed down my face till I met the smooth rock with my lips.

Neither old "Sacred" himself, nor any of his helpers, knew the road which I meant to take from Nazareth to the Sea of Galilee, and from thence to Jerusalem, so I was forced to add another to my party by hiring a guide. . . .

I passed by Cana, and the house of the marriage feast prolonged by miraculous wine; I came to the field in which our Saviour had rebuked the Scotch Sabbath-keepers of that period, by suffering his disciples to pluck corn on the Lord's Day; I rode over the ground where the fainting multitude had been fed, and they showed me some massive fragments —the relics (they said) of that wondrous banquet, now turned into stone. The petrifaction was most complete.

I ascended the height where our Lord was standing when He wrought the miracle. The hill rose lofty enough to show me the fairness of the land on all sides; but I have an ancient love for the mere features of a lake, and so, forgetting all else when I reached the summit, I looked away eagerly to the eastward. There she lay, the Sea of Galilee. Less stern than Wastwater—less fair than gentle Windermere—she had still the winning ways of an English lake; she caught from the smiling heavens unceasing light and changeful phases of beauty; and with all this brightness on her face, she yet clung fondly to the dull he-looking mountain at her side, as if she would

> "Soothe him with her finer fancies,
> Touch him with her lighter thought."

If one might judge of men's real thoughts by their writings, it would seem that there are people who can visit an interesting locality, and follow up continuously the exact train of thought that ought to be suggested by the historical associations of the place. A person of this sort can go to

Athens and think of nothing later than the age of Pericles —can live with the Scipios as long as he stays in Rome. I am not thus docile; it is only by snatches, and for few moments together, that I can really associate a place with its proper history.

"There at Tiberias, and along this western shore toward the north, and upon the bosom, too, of the lake, our Saviour and His disciples—" Away flew those recollections, and my mind strained eastward, because that that farthest shore was the end of the world that belongs to man the dweller—the beginning of the other and veiled world that is held by the strange race, whose life (like the pastime of Satan) is a "going to and fro upon the face of the earth." From those gray hills right away to the gates of Bagdad stretched forth the mysterious "Desert"—not a pale, void, sandy tract, but a land abounding in rich pastures—a land without cities or towns, without any "respectable" people, or any "respectable" things, yet yielding its 80,000 cavalry to the beck of a few old men. But once more—"Tiberias —the plain of Gennesareth—the very earth on which I stood —that the deep, low tones of the Saviour's voice should have gone forth into Eternity from out of the midst of these hills and these valleys!"—Ay, ay, but yet again the calm face of the lake was uplifted, and smiled upon my eyes with such familiar gaze that the "deep low tones" were hushed —the listening multitudes all passed away, and instead there came to me a loving thought from over the seas in England —a thought more sweet than Gospel to a willful mortal like this. . . .

Except at Jerusalem, never think of attempting to sleep in a "holy city." Old Jews from all parts of the world go to lay their bones upon the sacred soil; and since these people never return to their homes, it follows that any domestic vermin they may bring with them are likely to become permanently resident, so that the population is continually increasing. No recent census had been taken when I was at Tiberias; but I know that the congregation of fleas which attended at my church alone must have been some-

thing enormous. It was a carnal, self-seeking congregation, wholly inattentive to the service which was going on, and devoted to the one object of having my blood. The fleas of all nations were there. The smug, steady, importunate flea from Holywell Street—the pert, jumping *puce* from hungry France—the wary, watchful *pulce*, with his poisoned stiletto—the vengeful *pulga* of Castile with his ugly knife—the German *floh* with his knife and fork, insatiate, not rising from table—whole swarms from all the Russias, and Asiatic hordes unnumbered—all these were there, and all rejoiced in one great international feast. I could no more defend myself against my enemies than if I had been *pain à discrétion* in the hands of a French communist. After passing a night like this, you are glad to gather up the remains of your body long, long before morning dawns. Your skin is scorched—your temples throb—your lips feel withered and dried—your burning eyeballs are screwed inward against the brain. You have no hope but only in the saddle and the freshness of the morning air.

I calculated that, on the preceding day, we had nearly performed a two days' journey, I concluded that the Dead Sea must be near. In this I was right; for at about three or four o'clock in the afternoon I caught a first sight of its dismal face.

I went on, and came near to those waters of Death; they stretched deeply into the southern desert, and before me, and all around, as far away as the eye could follow, blank hills piled high over hills, pale, yellow, and naked, walled up in her tomb forever the dead and damned Gomorrah. There was no fly that hummed in the forbidden air, but, instead, a deep stillness—no grass grew from the earth—no weed peered through the void sand; but, in mockery of all life, there were trees borne down by Jordan in some ancient flood, and these, grotesquely planted upon the forlorn shore, spread out their grim skeleton arms all scorched and charred to blackness, by the heats of the long, silent years. . . .

I bathed in the Dead Sea. The ground covered by the

water sloped so gradually that I was not only forced to "sneak in," but to walk through the water nearly a quarter of a mile before I could get out of my depth. When at last I was able to attempt to dive, the salts held in solution made my eyes smart so sharply that the pain I thus suffered, joined with the weakness occasioned by want of food, made me giddy and faint for some moments; but I soon grew better. I knew beforehand the impossibility of sinking in this buoyant water; but I was surprised to find that I could not swim at my accustomed pace; my legs and feet were lifted so high and dry out of the lake that my stroke was baffled, and I found myself kicking against the thin air, instead of the dense fluid upon which I was swimming. The water is perfectly bright and clear; its taste detestable. After finishing my attempts at swimming and diving, I took some time in regaining the shore; and, before I began to dress, I found that the sun had already evaporated the water which clung to me, and that my skin was thickly incrusted with salts.

The enthusiasm that had glowed, or seemed to glow, within me, for one blessed moment, when I knelt by the shrine of the Virgin at Nazareth, was not rekindled at Jerusalem. In the stead of the solemn gloom and the deep stillness rightfully belonging to the Holy City, there was the hum and the bustle of active life. It was the "height of the season." The Easter ceremonies drew near; the pilgrims were flocking in from all quarters, and although their objects were partly at least of a religious character, yet their "arrivals" brought as much stir and liveliness to the city as if they had come up to marry their daughters.

The votaries who every year crowd to the Holy Sepulchre are chiefly of the Greek and Armenian Churches. They are not drawn into Palestine by a mere sentimental longing to stand upon the ground trodden by our Saviour, but rather they perform the pilgrimage as a plain duty strongly inculcated by their religion. A very great proportion of those who belong to the Greek Church contrive at some time or other in the course of their lives to achieve the enterprise.

Many in their infancy and childhood are brought to the holy sites by their parents, but those who have not had this advantage will often make it the main object of their lives to save money enough for this holy undertaking.

The pilgrims begin to arrive in Palestine some weeks before the Easter festival of the Greek Church. They come from Egypt, from all parts of Syria, from Armenia and Asia Minor, from Stamboul, from Roumelia, from the provinces of the Danube, and from all the Russias. Most of these people bring with them some articles of merchandise, but I myself believe (notwithstanding the common taunt against pilgrims) that they do this rather as a mode of paying the expenses of their journey, than from a spirit of mercenary speculation. They usually travel in families, for the women are of course more ardent than their husbands in undertaking these pious enterprises, and they take care to bring with them all their children, however young. They do this because the efficacy of the rites is quite independent of the age of the votary, and people whose careful mothers have obtained for them the benefit of the pilgrimage in early life, are saved from the expense and trouble of undertaking the journey at a later age.

The superior veneration so often excited by objects that are distant and unknown, shows, not perhaps the wrongheadedness of a man, but rather the transcendent power of his imagination. However this may be, and whether it is by mere obstinacy that they force their way through intervening distance, or whether they come by the winged strength of fancy, quite certainly the pilgrims who flock to Palestine from remote homes are the people most eager in the enterprise, and in number, too, they bear a very high proportion to the whole mass.

The great bulk of the pilgrims makes its way by sea to the port of Jaffa. A number of families will charter a vessel among them, all bringing their own provisions: these are of the simplest and cheapest kind. On board every vessel thus freighted, there is, I believe, a priest, who helps the people in their religious exercises, and tries (and fails)

to maintain something like order and harmony. The vessels employed in the service are usually Greek brigs or brigantines, and schooners, and the number of passengers stowed in them is almost always horribly excessive. The voyages are sadly protracted, not only by the land-seeking, storm-flying habits of the Greek seamen, but also by the endless schemes and speculations forever tempting them to touch at the nearest port. The voyage, too, must be made during winter, in order that Jerusalem may be reached some weeks before the Greek Easter.

When the pilgrims have landed at Jaffa they hire camels, horses, mules, or donkeys, and make their way as well as they can to the Holy City. The space fronting the Church of the Holy Sepulchre soon becomes a kind of bazaar, or rather, perhaps, reminds you of an English fair. On this spot the pilgrims display their merchandise; and there, too, the trading residents of the place offer their goods for sale. I have never, I think, seen elsewhere in Asia so much commercial animation as upon this square of ground by the church door: the "money-changers" seemed to be almost as brisk and lively as if they had been *within* the temple.

When I entered the church I found a Babel of worshipers. Greek, Roman, and Armenian priests were performing their different rites in various nooks and corners, and crowds of disciples were rushing about in all directions—some laughing and talking, some begging, but most of them going around in a regular and methodical way to kiss the sanctified spots, and speak the appointed syllables, and lay down the accustomed coin. If this kissing of the shrines had seemed as though it were done at the bidding of enthusiasm, or of any poor sentiment even feebly approaching to it, the sight would have been less odd to English eyes; but as it was, I felt shocked at the sight of grown men thus steadily and carefully embracing the sticks and the stones—not from love or from zeal (else God forbid that I should have blamed), but from a calm sense of duty; they seemed to be not "working out," but *transacting* the great business of salvation. . . .

A Protestant, familiar with the Holy Scriptures, but ignorant of tradition and the geography of modern Jerusalem, finds himself a good deal "mazed" when he first looks for the sacred sites. The Holy Sepulchre is not in a field without the walls, but in the midst, and in the best part of the town, under the roof of the great church which I have been talking about. It is a handsome tomb of oblong form, partly subterranean, and partly above ground, and closed in on all sides, except the one by which it is entered. You descend into the interior by a few steps, and there find an altar with burning tapers. This is the spot held in greater sanctity than any other in Jerusalem. When you have seen enough of it, you feel perhaps weary of the busy crowd, and inclined for a gallop; you ask your dragoman whether there will be time before sunset to send for horses and take a ride to Mount Calvary. Mount Calvary, signor?—*eccolo!* it is *upstairs—on the first floor*. In effect, you ascend, if I remember rightly, just thirteen steps, and then you are shown the now golden sockets in which the crosses of our Lord and the two thieves were fixed. All this is startling, but the truth is, that the city, having gathered around the Sepulchre (the main point of interest), has gradually crept northward, and thus in great measure are occasioned the many geographical surprises that puzzle the "Bible Christian."

The Church of the Holy Sepulchre comprises very compendiously almost all the spots associated with the closing career of our Lord. Just there, on our right, He stood and wept; by the pillar on your left He was scourged; on the spot, just before you, He was crowned with the crown of thorns—up there He was crucified, and down here He was buried. A locality is assigned to even the minutest event connected with the recorded history of our Saviour; even the spot where the cock crew when Peter denied his Master is ascertained and surrounded by the walls of an Armenian convent.

I went to see and to explore the Pyramids. Familiar to one from the days of early childhood are the forms of the Egyptian Pyramids, and now, as I approached them from

the banks of the Nile, I had no print, no picture before me, and yet the old shapes were there; there was no change; they were just as I had always known them. I straightened myself in my stirrups, and strove to persuade my understanding that this was real Egypt and that those angles which stood up between me and the West were of harder stuff, and more ancient than the paper pyramids of the green portfolio. Yet it was not till I came to the base of the great Pyramid that reality began to weigh upon my mind. Strange to say, the bigness of the distinct blocks of stones was the first sign by which I attained to feel the immensity of the whole pile. When I came, and trod, and touched with my hands, and climbed, in order that by climbing I might come to the top of one single stone, then, and almost suddenly, a cold sense and understanding of the Pyramid's enormity came down, overcasting my brain.

Now try to endure this homely, sick-nursish illustration of the effect produced upon one's mind by the mere vastness of the great Pyramid. When I was very young (between the ages, I believe, of three and five years), as I was then of delicate health, I was often in time of night the victim of a strange kind of mental oppression. I lay in my bed perfectly conscious, and with open eyes, but without power to speak or to move, and all the while my brain was oppressed to distraction by the presence of a single and abstract idea —the idea of solid immensity. It seemed to me in my agonies, that the horror of this visitation arose from its coming upon me without form or shape—that the close presence of the direst monster ever bred in hell would have been a thousand times more tolerable than that simple idea of solid size; my aching mind was fixed and riveted down upon the mere quality of vastness, vastness, vastness; and was not permitted to invest with it any particular object. If I could have done so, the torment would have ceased. When at last I was roused from this state of suffering, I could not, of course, in those days (knowing no verbal metaphysics, and no metaphysics at all, except by the dreadful experience of an abstract idea)—I could not, of course, find words to de-

scribe the nature of my sensations; and even now I cannot explain why it is that the forced contemplation of a mere quality, distinct from matter, should be so terrible. Well, now my eyes saw and knew, and my hands and my feet informed my understanding, that there was nothing at all abstract about the great Pyramid—it was a big triangle, sufficiently concrete, easy to see, and rough to the touch; it could not of course affect me with the peculiar sensation I have been talking of, but yet there was something akin to that old nightmare agony in the terrible completeness with which a mere mass of masonry could fill and load my mind.

And Time too; the remoteness of its origin, no less than the enormity of its proportions, screens an Egyptian pyramid from the easy and familiar contact of our modern minds. At its base the common earth ends, and all above is a world—one not created of God—not seeming to be made by men's hands, but rather the sheer giant-work of some old dismal age weighing down this younger planet.

Fine sayings! But the truth seems to be, after all, that the Pyramids are quite of this world; that they were piled up into the air for the realization of some kingly crotchets about immortality—some priestly longing for burial fees; and that as for the building—they were built like coral rocks by swarms of insects—by swarms of poor Egyptians, who were not only the abject tools and slaves of power, but who also ate onions for the reward of their immortal labors. The Pyramids are quite of this world.

I of course ascended to the summit of the great Pyramid, and also explored its chambers; but these I need not describe. The first time that I went to the Pyramids of Ghizeh, there was a number of Arabs hanging about in its neighborhood, and wanting to receive presents on various pretenses; their sheik was with them. There was also present an ill-looking fellow in soldier's uniform. This man on my departure claimed a reward, on the ground that he had maintained order and decorum amongst the Arabs. His claim was not considered valid by my dragoman, and was rejected accordingly. My donkey-boys afterward said they

had overheard this fellow propose to the sheik to put me to death whilst I was in the interior of the great Pyramid, and to share with him the booty. Fancy a struggle for life in one of those burial chambers, with acres and acres of solid masonry between oneself and the daylight! I felt exceedingly glad that I had not made the rascal a present.

I visited the very ancient Pyramids of Aboukir and Sakkara. There are many of these, differing the one from the other in shape as well as size; and it struck me that taken together they might be looked upon as showing the progress and perfection (such as it is) of pyramidical architecture. One of the pyramids at Sakkara is almost a rival for the full-grown monster at Ghizeh; others are scarcely more than vast heaps of brick and stone; and these last suggested to me the idea that, after all, the Pyramid is nothing more nor less than a variety of the sepulchral mound so common in most countries (including, I believe, Hindostan, from whence the Egyptians are supposed to have come). Men accustomed to raise these structures for their dead kings or conquerors would carry the usage with them in their migrations; but arriving in Egypt, and seeing the impossibility of finding earth sufficiently tenacious for a mound, they would approximate as nearly as might be to their ancient custom by raising up a round heap of stones, in short conical pyramids. Of these there are several at Sakkara, and the materials of some are thrown together without any order or regularity. The transition from this simple form to that of the square angular pyramid was easy and natural; and it seemed to me that the gradations through which the style passed from infancy up to its mature enormity could plainly be traced at Sakkara.

And near the Pyramids, more wondrous and more awful than all else in the land of Egypt, there sits the lonely Sphinx. Comely the creature is, but the comeliness is not of this world; the once worshiped beast is a deformity and a monster to this generation; and yet you can see that those lips, so thick and heavy, were fashioned according to some ancient mold of beauty—some mold of beauty now for-

gotten—forgotten because that Greece drew forth Cytherea from the flashing foam of the Ægean, and in her image created new forms of beauty, and made it a law among men that the short and proudly wreathed lip should stand for the sign and the main condition of loveliness through all generations to come. Yet still there lives on the race of those who were beautiful in the fashion of the elder world; and Christian girls of Coptic blood will look on you with the sad, serious gaze, and kiss your charitable hand with the big pouting lips of the very Sphinx.

Laugh and mock if you will at the worship of stone idols; but mark ye this, ye breakers of images, that in one regard the stone idol bears awful semblance of Deity—unchangefulness in the midst of change—the same seeming will and intent for ever and ever inexorable! Upon ancient dynasties of Ethiopian and Egyptian kings—upon Greek and Roman, upon Arab and Ottoman conquerors—upon Napoleon dreaming of an Eastern empire—upon battle and pestilence—upon the ceaseless misery of the Egyptian race—upon keen-eyed travelers—Herodotus yesterday, and Warburton to-day—upon all and more this unworldly Sphinx has watched, and watched like a Providence with the same earnest eyes, and the same sad, tranquil mien. And we, we shall die, and Islam will wither away; and the Englishman, straining far over to hold his loved India, will plant a firm foot on the banks of the Nile and sit in the seats of the Faithful, and still that sleepless rock will lie watching and watching the works of the new busy race, with those same sad, earnest eyes, and the same tranquil mien everlasting. You dare not mock the Sphinx.

AFRICA

Finding Livingstone

By HENRY M. STANLEY

WE push on rapidly, lest the news of our coming might reach the people of Bunder Ujiji before we come in sight, and are ready for them. We halt at a little brook, then ascend the long slope of a naked ridge, the very last of the myriads we have crossed. This alone prevents us from seeing the lake (Tanganyika) in all its vastness. We arrive at the summit, travel across and arrive at its western rim, and—pause, reader—the port of Ujiji is below us, embowered in the palms—only five hundred yards from us. At this grand moment we do not think of the hundreds of miles we have marched, of the hundreds of hills that we have ascended and descended, of the many forests we have traversed, of the jungles and thickets that annoyed us, of the fervid salt plains that blistered our feet, of the hot suns that scorched us, nor of the dangers and difficulties now happily surmounted. . . .

"Unfurl the flags and load your guns!" "Ay wallah, ay wallah bana!" respond the men eagerly. "One, two, three—fire!" A volley from nearly fifty guns roars like a salute from a battery of artillery. "Now, Kirangozi (guide), hold the white man's flag up high, and let the Zanzibar flag bring up the rear. And you must keep close together, and keep firing until we halt in the market-place, or before the white man's house. You have said to me often that you could smell the fish of the Tanganyika —I

can smell the fish of the Tanganyika now. There are fish, and beer, and a long rest waiting for you. MARCH!''

Before we had gone a hundred yards, our repeated volleys had the effect desired. We had awakened Ujiji to the knowledge that a caravan was coming, and the people were rushing up in hundreds to meet us. The mere sight of the flags informed every one immediately that we were a caravan; but the American flag borne aloft by gigantic Asmani (one of the porters or carriers), whose face was one vast smile on this day, rather staggered them at first. However, many of the people who now approached us remembered the flag. They had seen it float above the American consulate, and from the mast-head of many a ship in the harbor of Zanzibar, and they were soon heard welcoming the beautiful flag with cries of ''Bindera, Kisungu!''—a white man's flag. ''Bindera Merikani!''—the American flag.

Then we were surrounded by them; by Wajiji, Wanyamwezi, Wangwana, Warundi, Waguhha, Wamanyema, and Arabs, and were almost deafened with the shouts of ''Yambo, yambo, bana! Yambo bana! Yambo bana!'' To all and each of my men the welcome was given. We were now about three hundred yards from the village of Ujiji, and the crowds are dense about me. Suddenly I hear a voice on my right say, ''Good-morning, sir!'' Startled at hearing this greeting in the midst of such a crowd of black people, I turn sharply around in search of the man, and see him at my side, with the blackest of faces, but animated and joyous—a man dressed in a long white shirt, with a turban of American sheeting around his woolly head, and I ask, ''Who the mischief are you?'' ''I am Susi, the servant of Dr. Livingstone,'' said he, smiling, and showing a gleaming row of teeth. ''What! Is Dr. Livingstone here?'' ''Yes, sir.'' ''In this village?'' ''Yes, sir.'' ''Are you sure?'' ''Sure, sure, sir. Why, I leave him just now.'' ''Good-morning, sir,'' said another voice. ''Hallo,'' said I, ''is this another one?'' ''Yes, sir.'' ''Well, what is your name?'' ''My name is Chumah, sir.''

"And is the doctor well?" "Not very well, sir." "Where has he been so long?" "In Manyuema." "Now, you Susi, run and tell the doctor I am coming." "Yes, sir;" and off he darted like a madman. . . .

Soon Susi came running back, and asked me my name; he told the doctor I was coming, but the doctor was too surprised to believe him, and when the doctor asked him my name, Susi was rather staggered.

But, during Susi's absence, the news had been conveyed to the doctor that it was surely a white man that was coming, whose guns were firing and whose flag could be seen; and the great Arab magnates of Ujiji—Mohammed bin Sali, Sayd bin Majid, Abid bin Suliman, Mohammed bin Gharib, and others—had gathered together before the doctor's house, and the doctor had come out from his veranda to discuss the matter and await my arrival.

In the meantime, the head of the expedition had halted, and the Kirangozi was out of the ranks, holding his flag aloft, and Selim (the interpreter) said to me: "I see the doctor, sir. Oh, what an old man! He has got a white beard." And I—what would I not have given for a bit of friendly wilderness, where, unseen, I might vent my joy in some mad freak, such as idiotically biting my hand, turning a somersault, or slashing at trees, in order to allay those excited feelings that were well-nigh uncontrollable. My heart beats fast, but I must not let my face betray my emotions, lest it should detract from the dignity of a white man appearing under such extraordinary circumstances.

So I did that which I thought was the most dignified. I pushed back the crowds, and passing from the rear, walked down a living avenue of people, until I came in front of the semicircle of Arabs, in the front of which stood the white man with the gray beard. As I advanced slowly toward him I noticed that he was pale, looked wearied, wore a bluish cap with a faded gold band round it, had on a red-sleeved waistcoat, and a pair of gray tweed trousers. I would have run to him, only I was a coward in the presence of such a mob—would have embraced him, only, he being

an Englishman, I did not know how he would receive me; so I did what cowardice and false pride suggested was the best thing—walked deliberately to him, took off my hat, and said: "Dr. Livingstone, I presume?" "Yes," said he, with a kind smile, lifting his cap slightly. I replace my hat on my head, and he puts on his cap, and we both grasp hands, and then I say aloud: "I thank God, doctor, I have been permitted to see you." He answered: "I feel thankful that I am here to welcome you." I turn to the Arabs, take off my hat to them in response to the saluting chorus of "Yambos" I receive, and the doctor introduces them to me by name. Then, oblivious of the crowds, oblivious of the men who shared with me my dangers, we—Livingstone and I—turn our faces toward his tembe (or hut). He points to the veranda, or rather mud platform under the broad, overhanging eaves; he points to his own particular seat, which I see his age and experience in Africa has suggested—namely, a straw mat, with a goatskin over it, and another skin nailed against the wall to protect his back from contact with the cold mud. I protest against taking this seat, which so much more befits him than me, but the doctor will not yield—I must take it.

We are seated, the doctor and I, with our backs to the wall. The Arabs take seats on our left. More than a thousand natives are in our front, filling the whole square densely, indulging their curiosity, and discussing the fact of two white men meeting at Ujiji—one just come from Manuyema, in the west; the other from Unyanembe in the east.

AFRICA

Up the Mountains of the Moon

By HENRY M. STANLEY

IN his lecture, "Through the Great Forest," Mr. Stanley said, I propose to take you through the great forest up to the Mountains of the Moon, around the great lakes and across Africa. We traveled over six thousand miles. The time occupied was nine hundred and eighty-seven days. The first section, of about one thousand miles, was along an unknown country by steamer up the Aruwimi River, to a place called Yambuya. The navigation was interrupted by rapids. On foot next for one hundred and sixty days we went through one unbroken forest. That journey was not through poetic glades, with here and there thrown in a bit of mossy dell, with little or no undergrowth, and free access and an open view into sylvan wilds. You may remember your experiences of last summer when you took an excursion into the woods. There you found a poetic seclusion, a graceful disorder, mossy grounds, trees of familiar kinds, springy turf, bits of picturesque skies, and the sun shedding softened streams of light upon tree and turf. Ah! the African forest furnishes no such picturesque sights or pleasant glades.

Language is too poor to describe it. First, think of the tropics and a climate of humidity and the heat of perpetual summer. You feel, as you enter into this unknown region, the robustness of vegetation. There is a still, warm vapor in suffocating volumes. First, you dispense with your upper

garments, and then you want to get rid of the rest. The gloom is so great that you can compare it only to the twilight of evening. You see the leafage rising up black and green; impenetrable clumps of trees, some of them reaching a height of two hundred and fifty feet. There is no symmetry, grace or softness, but all is wild, uncouth, and awful. At every step you see masses of bewildering undergrowths, a wonderful variety of plants. There is an absence of any sense of decay; rather the sense of the general healthfulness of the plants, an enduring youth, exhaustless wonders.

There is no longer any energy among us. We behold everlasting greenness, eternal vitality and fertility. Above all is a protecting, impenetrable canopy. Sacred trees, with leafy crowns, tower above us. African mahogany, the unyielding iron-wood, the butternut-tree, and other varieties too numerous to mention, all united in closest embrace, darken the life below till it is suggestive of mystery and awe. As we march silently, slowly, and painfully on, the forest changes its aspect, and we note the labors of forgotten tribes and come to swampy grounds. One day our march is very slow through masses of forest wilderness. On the next day we go through a more open section; on the following day through frowning depths and over ground strewn with dead leaves, worm-eaten trunks or dried branches. But always and above all tower the primeval woods, the deep shadows unbroken save by the flashes of lightning.

On some days the march has to be prolonged beyond the usual hour for halting that has been fixed upon, because of the difficulty of choosing a ground fit for a camp. For we bear with us tons of perishable goods that have to be protected from the floods of rain. But at last a suitable spot is found. The whistle is sounded and the loaded files come up, and one by one they deposit their burdens in due order. Then, when the tents are erected, the camp resounds with the sound of voices. Some men with axes trim the poles of the tents or cut fuel. Some with knives peel the saplings to utilize the bark for bedding. Some dig holes in the ground for the tent-poles.

SIR HENRY M. STANLEY

In about two hours a little town will be seen, and a hundred fires will blaze, and a hundred pots will be sending up clouds of savory steam. The camp is animated and resounds with chatter, all the louder because confined by the four sides of our forest home. After the guards are set around the camp we feel safe from the surprises of the cannibals, and those who wish are free to wander away. At such a time I have been sensible of the utter poverty of words to describe my surroundings. It is not a time for poetic brooding, but one after another the senses yield to the charm of seclusion. Then I behold a magnificent forest in listening attitude, a great gloom, trees eloquent of antiquity and of venerable brotherhood. I marvel at the age of these giants. Since the period when the nuts dropped from the trees and took root, what generations have passed! generation after generation, dynasty after dynasty, empire after empire, one national period after another—and the trees grow taller and taller through the centuries, yearly extending in growth, extending in limb, and rising steadily, invincibly upward, indifferent whether their crested tops are illuminated by sunshine or dripped with rain or are tossed by the raging tornado of the tropics. That old patriarch yonder, with massive and wrinkled bark, was probably born a thousand years before the siege of Troy. That head you see above you was a shrub in the days of Herod the Great. Even the palm by the river bank, which seems so utterly out of place among the forest kings, probably sprouted first when Columbus started his course across the Atlantic.

They are brimming over with vitality. We feel that their vegetable life is incomparable with our own. They stand and have stood while the centuries rolled by, mute and rigid in the gloaming; they are there to-day in enormous multitudes. The sun shines on their tops with utmost fervor. The mist floods around them with grayish clouds. They will brave the elements in the future with the same peaceful, proud endurance as they have done in the past. The forest there faithfully represents human life in pantomime—that struggle for space—selfish indifference to others

may be found there as with us. When the topmost bough is shattered by lightning, another fed by the air and light springs up triumphantly to usurp its place. You can see with what greed others hasten to occupy the opening made by the uniform height and equal growth.

I found also that they are subject to diseases, as is humanity. Countless parasites are around the stems and strangle their growth. The ants eat into their boles, and great branches are pushed aside by the elephants rubbing their sides against them. You will see among them large tumors on their stems. Others falling into decay with age are bleached white by death. The ground underneath consists of the dust of others which are gone. It is carpeted with their dead leaves and strewn with their broken limbs. Scarcely an hour passes but in your neighborhood a tree falls. There is a sound as of an explosion and a shock that shakes the earth, and a branch comes tumbling down with a startling crash. A twig snaps or a leaf falls every second of time. But with this death there is life, for seeds also fall, and as often as a tree dies, another has sprouted, or with the fall of a leaf another has sprouted.

During a year of wanderings we noted five hundred and sixty hours of rain, which would be about one hour of rain for every fifteen of dry weather during twelve months. How much sunshine there was we would not say. It seemed to us there was only one hour of sun brightness to every hour of night or fog or gloom. We could tell only from the heat in the forests that the sun was out. We could only feel its dry fervor in the clearings, but the effect of this supermoisture is the exceeding vegetation. The trees from summit to branch are clothed with verdure and wound around by enormous parasites and climbers. The grander trees bear the heaviest and thickest species, which run from fourteen to sixteen inches in diameter. Those of the largest size reach fourteen hundred feet, and they continue their serpentine twisting from one limb to another, and finally hang suspended thirty or forty feet above, like immense anacondas, swinging with every gust, or they ascend to the

branches of other trees until they are lost in the depth above. There are hundreds of them. They are seen in a great net-work, web-like formation. There is not a sapling or tree, from the infant of one year to the holy patriarch of forty centuries, but is infested with both vegetable and animal parasites. Thin vines and serpent-like creepers all swing solemnly hither and thither under the influence of a strong wind, with countless millions of leaves resting on the great limbs of the trees, embracing the rigid branches, creaking and grinding.

You can hardly realize the scene of desolation that is found in the sepulchral gloom of the forests. But when the storm king is in the air above, and every tree seems starting from its sepulchral stillness in a mad dance, and there is a mad massing and warring and rushing through the foliage shades, and the woods bow their heads in agonized grief, try however you may, you cannot help sympathizing with the scene. It is awful and horrible to hear all these sounds in the pitch-black night, when the tornado descends on the forests, and the elements are accompanied with all their terrors, with blinding brands of lightning and the cannonade of the thunder, when the whole camp is a blaze of blinding light. It is far more frightful when the rain pours over the desolate scene in drowning showers. You can understand now what effect such experiences of tempest and rain and darkness had upon the minds of our people, who knew not where this endless march was leading, as the days grew into weeks and the weeks into long months, and not a soul could enlighten them as to the possible limits of this demon world—all this added to continuous pain from hunger, misery and sickness, and the dull pangs of sorrow as they tossed their dead companions into the dark river, in the absence of all hope in the future. Gaunt famine smote them dead by the scores; their limbs were ravaged by rabid ulcers, the stagnant atmosphere poisoning them with its breath, ants and ticks creeping over their bodies, fierce savages jumping upon them with dagger or spears, while they feebly crawled after the caravan; ruthless pigmies lying behind trees shoot-

ing their barbed arrows into their bodies; and cannibals attacking them as they gathered over their evening fire. Death cut our people off with revolting treachery, and sudden as lightning stroke.

Finally, after one hundred and sixty days of marching, we emerged from the forest. Then our eyes danced with rapture, for we beheld fresh young grass spreading out into flowery fields and pastures; and then beyond round and picturesquely molded hills. Such a sight we hailed with shouts of praise and loud thanksgivings and murmurs of worship according to our respective faiths. The delicious grass, the warbling of birds, this summer loveliness of the land and the warm life and beauteous earth reposing in peace were sublime. Our men had dreams of joy and they called it heaven. Its length was six hundred and twenty English miles from north to south and from west to east five hundred and twenty miles. It comprised 320,000 square miles, the whole equal to 400,000 square miles.

In the beginning of 1886 the Arab slave-traders had not penetrated very far into this region. The Arabs were for some time deterred from making any serious effort to push into this forest, but the increasing price of ivory and the scarcity of it subsequently inspired them with greater efforts. In May, 1887, they had gained a footing in Etura. Separating from one another, they built three stations down the Etura, about a hundred miles apart, one at the Leda, forming the apex of a triangle, the base line of which was fifty miles away. They then began killing the aborigines, and appropriating or looting whatever property they found. Within five months they cut a swath two hundred and twenty-seven miles long, and in width about one hundred and eighty English miles. Not one village had been left standing. Their plantain groves had become so many jungles. The aborigines had either been destroyed, or were hidden in the darkest recesses of the forests. This is the reason why in 1887 our expedition suffered so terribly from hunger. Were you enabled to take a bird's-eye view of the

forests, the native clearings would have appeared like so many circular bits of pale green.

There were no tracks, and we possessed only one steel boat for the river, and part of the journey, therefore, had to be made by forcing a way through the bush. If that was too thick we scattered through the underbrush, but we had bill-hook and cutter in constant exercise. The first month in the bush we progressed very slowly. When finally, after many months' labors, we reached a track, our pace was increased to one and three-quarter miles an hour.

As the column stretched in file over a considerable length of ground the pioneers had to slash away a broad blaze on a tree every few yards. It was most difficult to distinguish the track. But by the time the whole of the column had passed over it the trail was pretty clear. Some days, however, when I would be leading a river party, the pioneers would lose all trace of it. They would leave the river and relying too much on their knowledge of woodland, try to cut a straight course. Thus they frequently lost their way, and for hours the caravan would be wandering in the woods while the river party would be anxiously waiting for them. On one occasion the parties were separated six days.

As we drew nearer the eastern limits the nature of our difficulties changed. We followed native paths. Then the voices of the foremost men would be heard bawling out the character of their troubles, one by one: "Skewers below," "Ants—red ants on the march," "A tangling root," "'Ware skewers," "Mushy mud, with no bottom," "Wasps." These warnings, while they served to prevent us from falling into pitfalls, retarded the march.

If I were to enumerate the names of the various tribes whose territories we traversed there would be general hilarity, I fear, in an American audience. The inhabitants of the forest are divided into big people and little people. The taller men are those who own clearings in the forest. The pigmies are unsettled and restless little nomads, who slide about through the woods, and whose temporary camps are generally found two or three miles outside of the banana

plantations. The first are very like other Africans, but much browner than the dwellers in the plains, probably from living so much in the shade. Each tribe has its distinguishing marks, tattooings of some figure or another on the forehead or on the cheeks or chins. Some shave their heads; some wear their hair long or in ringlets. There is no elaborate hair-dressing in the forest, as lower down along the Congo. Their ornaments consist of crocodile, monkey or human teeth, strung in necklets and anklets and bracelets. Their dress is a clout of dark cloth, a strip four feet long. For head-wear these people have a head-piece of basket work adorned with a parrot's red tail-feathers. Their weapons are spears, bows and arrows, broad knives, and sometimes a battle-ax.

These are they who sometimes make great clearings in the woods, and in the midst of a confusion of fallen trees build compact villages. Outside the villages there is a tangle of brushwood, half hidden by plantain groves. The villages swarm with goats and fowls, which now and again furnish the people with food. The natives are addicted to cannibalism, but it must not be supposed that they feed on their own relatives or tribe. Neither is a human victim always easy to secure. The tribes are too far apart; but if a neighboring community, ten or a dozen miles off, advances, there may possibly be an accident, when a body may be secured. I once witnessed the preparations for a cannibal feast. Our men approached an Irwangas village. I fired a shot to warn the chief that we were friendly, and it happened to frighten a party of natives preparing a victim for their repast. In a few seconds our boats were at the bank of the river, and we saw the body of a woman who had been speared in the throat and then washed. The black pots, the bananas were all there, and in a short time everything would have been ready. We found afterward that the woman had been sick and had been left by the Arabs.

We had also a Manuema boy who slipped into the bush to evade the rear guard, after a caravan had passed. He

advanced slowly toward the camp and had almost reached it when he was sighted by natives and slain almost at the same time that a party of companions was proceeding to his assistance. Finding the body in the path, they carried it into the woods, and covered it lightly with leaves, with the intention of returning and burying it. The natives, who had been close observers of what had been done, came up and took it off. In the morning the Manuemas found only a few bones.

During many months of marching in the forest we captured hundreds of large and small natives. They were very useful in their own districts, giving information about the tribes, and showing paths to banana plantations, but once beyond their territory they were of no earthly use. So they were permitted to return to their homes, though in many instances they did not want to be released. My observation and experience led me to the conclusion that morally, the forest natives are the lowest of the human race. They have no idea of a God, and nothing approaching our soft sensibilities. Their gratitude is so short-lived that it might be compared to that of a fierce bull-dog restrained from throttling you only by devouring a piece of beef just thrown to it. What a number of ghastly death scenes I could describe resulting from the cruel persistency and devilish malice of these savages. At the same time many of our men in the presence of such dangers exhibited great carelessness. White men displayed more caution, but it was almost impossible to get the others to exercise their faculties of sight, hearing, and judgment. Had the savages generally been as artful as the pigmies we should all have been lost. But, fortunately, they were themselves thoughtless, although cruel enough to work any mischief upon us.

Our scouts frequently came across newly-formed pigmy camps, and after awhile they learned the art of stalking the vicious little creatures. The first one we thus got hold of was a plump little queen of a pigmy tribe. Around her neck were several polished iron collars with long projecting horns at the end, and down her breast hung curiously made

native chains. Around her arms were several rings, and her ankles were protected by scores of rings, so close together that they resembled a compact band. Around her waist was a breech-cloth. She must have been about eighteen years old, but she was as well developed as a white woman of twenty-five or twenty-six. Her feet were beautifully formed, the instep arched, the hands small, the fingers slender, and the nails filbert-shaped. The face was broad and round, the lips were full, and the large, black eyes, like those of a young gazelle. The face was singularly impressive, but the eyes were most expressive and seemed to say: "I am much too pretty to be hurt and I very well know what I am worth." The tender treatment that she received reassured her. She was ultimately consigned to the care of the surgeon, whose gentle manner won her from all thoughts of flight. After a while she became an intelligent cook, and a trustworthy servant, and she always bore herself most modestly.

In October, 1888, we suddenly pounced on a family of dwarfs, peeling bananas, and succeeded in capturing a full-grown adult and his sister, or wife. Before the pair could recover their faculties, they were led to the center of our camp, and hundreds of great, burly men thronged to see the strangers. We had among us some tall Soudanese, ranging from six feet to six feet four in height. I observed that the head of the pigmy man reached to about the waist-belts of these Soudanese. Both the man and woman were considerably agitated, but while they doubted, and anxiously wondered, what was to be their fate, my mind recurred to the described scene that took place twenty-five centuries ago when the five young Nassamonian explorers were captured by a band of dwarfs and taken through the Nigritian villages. How I wished that I could extract from the representative of this old people some of their traditions. Before a Phœnician bark ever sailed to Britain these little people were ranging these illimitable forests which stretch westward from the Moon Mountains. In all old maps you

will see "pigmies" printed side by side in bold letters, with the Mountains of the Moon.

But the little man who was now the cynosure of the camp, with his grotesque dignity of manhood, his cap of basket-work, his noble amplitude of abdomen and narrow chest, had no conception of the respect I entertained for him as the scion of a most ancient ancestry, or surely he would never have trembled for his fate. But in a short time we succeeded in relieving him of his fears by gently chucking him under the chin, and administering a friendly slap on the back. His companion, observing how he was treated, also recovered from her fright. Gaining confidence, the little man, as though to repay our kindness, informed us, by the most voluble of sign-language, that there was abundance of food two days off; that the river we were in search of was only four days off; that he knew where bananas grew as big as logs compared with which the bananas he had been eating when captured were simply contemptibly small. Personally, I am of opinion that this particular pigmy would have made a very good actor, and that in the art of lying it would be difficult to give him points.

A few days after this capture another group of pigmies was secured. Among them was a shrewish old woman, and a lad so shy that he could not be made to speak. But the old woman talked enough for a whole tribe and kept up an incessant scolding from morning till night, and exhibited a consummate mastery of pigmy cuss-words. Despite her age she was remarkably strong and nimble, and always carried on her back a hamper. Into this her captor would stow away his pots and kettles and other equipments until she became a veritable camel of the forest. When I discovered this, I came to her relief and threw out the contents of her hamper. I received for my pains a rattling expression of gratitude which sounded very much like swear-words. As for the shy boy, he got over his shyness and became a pet of the officer who had surprised him. His intelligence and industry made him most valuable, far superior to the average

of white servants. We came in time to regard these pigmies as indispensable, and some of them would certainly have been taken with us back to Europe, but after they got out of the forest the changed conditions and the difference in climate proved too much for them. Their little legs could not stand the long marches, and one after another they collapsed.

The next most interesting discovery we made was that of the long-lost Mountains of the Moon. In my book, "Darkest Africa," I have illustrated with small maps our knowledge of Africa derived from the ancients. In these it is clearly shown that ivory-hunters and slave-traders had reached that region in times past. Information as to it varied. The last traveler there, as now, was regarded as the best informed. This is why the great lakes of the interior and the Mountains of the Moon shifted every hundred years or so ten degrees north or south of the Equator. It was in December, 1887, that we got a glimpse of the twin cones of Ruwenzori. There are many, doubtless, like myself, who, while gazing upon any ancient work, be it an Egyptian Pyramid, or Sphinx, be it an Athenian Parthenon, Palmyrene sun temple, Persepolitan palace, or even an old English castle, will readily confess to feeling a peculiar emotion at the sight. The venerableness of it, which time only can give, its associations with men long gathered to their fathers, the builders and inhabiters now quite forgotten, appeal to a certain sympathy in the living. For its history there is a vague yearning; its age awakens something like exultation that we little mortals can build such time-defying structures. But more powerful and higher is that emotion which is roused at the sight of a hoary old mountain like this of Ruwenzori, which we know to be countless thousands of years old. When we think how long it required the melted snow to carve out these ravines, hundreds of fathoms deep, through the rocky cone of the range, or we consider the ages required to spread out the débris from its sides and bosom to cover the Semliki Valley and the Nyanza plains, we are struck dumb at the immeasurable-

ness of the interval between that age when Ruwenzori rose aloft into being and now; we become possessed with a wholesome awe, and can but feel a cheerful faith that it was good for us to have seen it.

Another emotion is that inspired by the thought that in one of the darkest corners of the earth, shrouded by perpetual mist, brooding under the eternal storm-clouds, surrounded by darkness and mystery, there has been hidden to this day a giant among mountains, the melting snow of whose tops has been for some fifty centuries most vital to the peoples of Egypt. Imagine to what a god the reverently inclined primal nations would have exalted this mountain, which from such a far-away region as this contributed so copiously to their beneficent and sacred Nile. And this thought of the beneficent Nile brings on another. In fancy we look down along that crooked silver vein to where it disports and spreads out to infuse new life to Egypt near the Pyramids, some 4000 miles away, where we behold populous swarms of men—Arabs, Copts, Fellahs, Negroes, Turks, Greeks, Italians, Frenchmen, English, Germans, and Americans—bustling, jostling, or lounging; and we feel a pardonable pride in being able to inform them for the first time that much of the sweet water they drink and whose virtues they so often exalt, issues from the deep and extensive snowbeds of Ruwenzori or Ruwenjura—"the Cloud-King."

These brief—too brief—views of the superb Rain-Creator or Cloud-King, as the Wakonju fondly termed their mist-shrouded mountains, fill the gazer with a feeling as of a glimpse of celestial splendor. While it lasted, I observed the rapt faces of whites and blacks set fixed and uplifted in speechless wonder toward that upper region of cold brightness and perfect peace, so high above mortal reach, so tranquil and restful, of such immaculate and stainless purity, that thought and desire of expression were altogether too deep for utterance. What stranger contrast could there be than our own nether world of torrid temperature, eternally green, sappy plants, and never-fading luxuriance and verdure, with its savagery and war-alarms, and deep stains of

blood-red sin, to that lofty mountain king, clad in its pure white raiment of snow, surrounded by myriads of dark mountains, low as bending worshipers before the throne of a monarch, on whose cold, white face was inscribed "Infinity and Everlasting." These moments of supreme feeling are memorable for the utter abstraction of the mind from all that is sordid and ignoble, and its utter absorption in the presence of unreachable loftiness, indescribable majesty, constraining it not only reverentially to admire, but to adore in silence, the image of the Eternal. Never can a man be so fit for Heaven as during such moments, for however scornful and insolent he may have been at other times, he now has become as a little child, filled with wonder and reverence before what he has conceived to be sublime and Divine. We had been strangers for many months to the indulgence of any thought of this character. Our senses, between the hours of sleeping and waking, had been occupied by the imperious and imminent necessities of each hour, which required unrelaxing vigilance and forethought. It is true we had been touched with the view from the mount called Pisgah of that universal extent of forest, spreading out on all sides but one, to many hundreds of miles; we had been elated into hysteria when, after five months' immurement in the depths of forest wilds, we once again trod upon green grass and enjoyed open and unlimited views of our surroundings—luxuriant vales, varying hill-forms on all sides, rolling plains, over which the long spring grass seemed to race and leap in gladness before the cooling gale; we had admired the broad sweep and the silvered face of Lake Albert, and enjoyed a period of intense rejoicing when we knew we had reached, after infinite trials, the bourne and limit of our journeyings; but the desire and involuntary act of worship were never provoked, nor the emotions stirred so deeply, as when we suddenly looked up and beheld the skyey crests and snowy breasts of Ruwenzori uplifted into an inaccessible altitude, so like what our conceptions might be of a celestial castle, with dominating battlement, and leagues upon leagues of unscalable walls.

Revisiting the Lake Albert region at later periods we found that the snow-capped peaks had an exasperating habit of disappearing from view, and it was only in May of 1889 that I finally solved the mystery. Rolling clouds and vapors sometimes blot them out. This is why the natives call them "Ruwenzori," which means "the Cloud-King."

The discovery of the Snow Mountains led to two more discoveries—that of the Albert Edward Nyanza, and the head-waters of the Albertine Nile; and the confused information given by the priests of Isis in olden times to Egyptian and Greek geographers, furnished by the ivory traders and slave-raiders of old, has now been made perfectly clear in all its important details.

Day after day we marched, marking the features of this splendid primeval world, revealed for the first time. Now and then we caught glimpses of a multitude of precipitous cliffs which towered some 15,000 feet above. As we approached Albert Edward, we emerged from the forest, and a vast plain stretched before us, covered by immense fields of corn and sugar-cane. The natives, black but amiable, collected about us, and sought our protection from incursive tribes. They volunteered to be our guides, and led us up a vast grassy promontory, where for a day we reveled in pure, cold air, and the next day they took us down to the lake where we tasted the tropics once more.

From the eastern shores of Lake Albert two days climbing brought us to a beautiful region. The people here were divided into two tribes, but they were derived, apparently, from a common origin. They were a fine-featured race, and the men grew very tall. They lived mainly upon milk and sugar-cane, and, unfortunately for their future civilization, they are massed into nations that are ruled by despotic kings.

From this country we struck the eastern end of Victoria Nyanza, and by traveling along the shore we discovered a new addition to this lake of 26,900 square miles. We struck the region during its dry season. The grass was sere; chilly winds blew over the uplands; a cold mist frequently obscured the face of the country, and a heavy,

leaden sky seemed to bear down upon us in a searching cold. Our half-naked people shivered, and one day five fell dead in their tracks as though they were shot. They would all have perished had not the officer commanding the rear guard bolted, and made great bonfires.

During our march to the sea, it had gradually dawned upon us that there was intense political rivalry between England and Germany in Africa. But as our expedition had been solely to relieve Emin, we flattered ourselves that we had nothing to do with these dissensions.

Emin was a German, and we accepted German hospitality as a proof of their good-will. We knew Emin was pliable and yielding. We supposed his gratitude was not very deep. But we thought that nothing could rupture the good feeling that had hitherto existed between us. But the accident at Bagamoya, the first evening after reaching the sea, and being embraced by his countrymen, was wholly unexpected, and it gave the Germans on the East Coast a fair opportunity. We had abundant proof afterward how beautifully the Germans understood Emin's character. Frenchmen and Italians, perhaps, would have performed their parts far more efficiently without advertising the means employed.

Emin at the banquet in our honor was joyously grateful to each member of our expedition. He embraced Stairs and Nelson and Jephson, and flung himself on the neck of Parke; stood between Wissman and myself uttering gayly his happy feelings, and then went away and fell over the balcony to the dismay of the company. He was taken to the hospital in an unconscious state. On his recovering consciousness we had a kindly parting, and then the operations of his countrymen began. First, Dr. Parke, who had volunteered to attend the sufferer, was made to feel that his presence was irksome. Servants became careless; the food was stinted. If he went to the officers' mess-table, the German officers continued to show their strong disapproval of his presence. Then Dr. Parke fell ill of a fever and was conveyed to Zanzibar almost dying. Our letters to Emin were

unanswered. If we expressed a desire to visit him at Bagamoya, at once a bulletin came out with a story of his relapse. We tried it three times with the same result. The play deepened in interest and the conclusion was darkly hinted.

Having succeeded in relieving himself from obligation to us, our acquaintance was renounced. This incivility was presently fanned by his countrymen into a hot hostility. On coming out of the hospital Emin published broadcast through Zanzibar the fact that he had severed himself from us, and wrote letters to Germany to the same effect, which his delighted friends made use of. He next sought to quarrel with the Egyptian Government. He cabled to Cairo for a small credit at Zanzibar. Sir Evelyn Baring kindly telegraphed back that the British Consul at Zanzibar would honor the credit. Emin construed this as an insult—the idea that he, Governor-General of the Equatorial Province, should receive drafts through an English consul-general! To his old officers and generals, Egyptian and Soudanese, he wrote frankly that he would have nothing to do with them, and declined to pay their accounts, so these soldiers, who had been with him fourteen years, were compelled to wait six months before getting any money. To General Casati, with whom he had lived eight years like a brother, he turned the cold shoulder. For a whole month he seemed to be negotiating with the British East African Company for employment. Then suddenly he turned and took employment with the Germans. The Germans had triumphed, according to their view. They certainly had Emin's nature aright, but I think they would have succeeded better had they managed to leave the victim of their political aspirations with some portion of the common virtues, and without exposing him to the contempt of others not quite so interested in their politics.

Dr. Peters and other Germans had raided a broad track through a territory under the guise of assisting Emin. He reached Uganda and made treaties there. At the same time the poor Pasha, breathing fury against civilization, was re-

turning to the interior to annex the whole of Central Africa for Germany. Meantime seeing pretty clearly how this was tending, I began that series of speeches in England which ended in stimulating greater attention in Britain to Africa. A friendly agreement was concluded between Great Britain and Germany wherein hard and fast boundaries were fixed between the possessions of the two powers. Both nations expressed themselves as satisfied with the agreement, but I fear that Dr. Peters, homeward bound with his pockets full of treaties, and Emin pressing forward bent on large annexations and the Germans of East Africa whose impetuous policy had been the cause of all this, were but little pleased.

AFRICA

The Pyramids

By EDWARD D. CLARKE

WE were roused as soon as the sun dawned by Antony, our faithful Greek servant and interpreter, with the intelligence that the Pyramids were in view. We hastened from the cabin; and never will the impression made by their appearance be obliterated. By reflecting the sun's rays, they appear as white as snow, and of such surprising magnitude, that nothing we had previously conceived in our imagination had prepared us for the spectacle we beheld. The sight instantly convinced us that no power of description, no delineation, can convey ideas adequate to the effect produced in viewing these stupendous monuments. The formality of their construction is lost in their prodigious magnitude; the mind, elevated by wonder, feels at once the force of an axiom, which, however disputed, experience confirms—that in vastness, whatsoever be its nature, there dwells sublimity. Another proof of their indescribable power is, that no one ever approached them under other emotions than those of terror, which is another principal source of the sublime. In certain instances of irritable feeling, this impression of awe and fear has been so great as to cause pain rather than pleasure; hence, perhaps, have originated descriptions of the Pyramids which represent them as deformed and gloomy masses, without taste or beauty. Persons who have derived no satisfaction from the contemplation of them, may not have been conscious that the uneasiness they ex-

perienced was a result of their own sensibility. Others have acknowledged ideas widely different, excited by every wonderful circumstance of character and of situation—ideas of duration almost endless, of power inconceivable, of majesty supreme, of solitude most awful, of grandeur, of desolation, and of repose.

Upon August 23, 1802, we set out for the Pyramids, the inundation enabling us to approach within less than a mile of the larger pyramid in our djerm or boat. Messrs. Hammer and Hamilton accompanied us. We arrived at Djiza at daybreak, and called upon some English officers, who wished to join our party upon this occasion. From Djiza our approach to the Pyramids was through a swampy country, by means of a narrow canal, which, however, was deep enough; and we arrived without any obstacle at nine o'clock at the bottom of a sandy slope leading up to the principal pyramid. Some Bedouin Arabs, who had assembled to receive us upon our landing, were much amused by the eagerness excited in our whole party to prove who should first set his foot upon the summit of this artificial mountain. With what amazement did we survey the vast surface that was presented to us when we arrived at this stupendous monument, which seemed to reach the clouds. Here and there appeared some Arab guides upon the immense masses above us, like so many pigmies, waiting to show the way to the summit. Now and then we thought we heard voices, and listened; but it was the wind in powerful gusts sweeping the immense ranges of stone. Already some of our party had begun the ascent, and were pausing at the tremendous depth which they saw below. One of our military companions, after having surmounted the most difficult part of the undertaking, became giddy in consequence of looking down from the elevation he had attained; and being compelled to abandon the project, he hired an Arab to assist him in effecting his descent. The rest of us, more accustomed to the business of climbing heights, with many a halt for respiration, and many an exclamation of wonder, pursued our way toward the summit. The mode

Copyright by Underwood & Underwood.

THE GREAT PYRAMID OF GIZEH.

of ascent has been frequently described; and yet, from the questions which are often proposed to travelers, it does not appear to be generally understood. The reader may imagine himself to be upon a staircase, every step of which, to a man of middle stature, is nearly breast-high, and the breadth of each step is equal to its height, consequently the footing is secure; and although a retrospect in going up be sometimes fearful to persons unaccustomed to look down from any considerable elevation, yet there is little danger of falling. In some places, indeed, where the stones are decayed, caution may be required, and an Arab guide is always necessary to avoid a total interruption; but upon the whole the means of ascent are such that almost every one may acomplish it. Our progress was impeded by other causes. We carried with us a few instruments, such as our boat-compass, a thermometer, a telescope, etc.; these could not be trusted in the hands of the Arabs, and they were liable to be broken every instant. At length we reached the topmost tier, to the great delight and satisfaction of all the party. Here we found a platform thirty-two feet square, consisting of nine large stones, each of which might weigh about a ton, although they are much inferior in size to some of the stones used in the construction of this pyramid. Travelers of all ages and of various nations have here inscribed their names. Some are written in Greek, many in French, a few in Arabic, one or two in English, and others in Latin. We were as desirous as our predecessors to leave a memorial of our arrival; it seemed to be a tribute of thankfulness due for the success of our undertaking; and presently every one of our party was seen busied in adding the inscription of his name.

Upon this area, which looks like a point when seen from Cairo or from the Nile, it is extraordinary that none of those numerous hermits fixed their abode who retired to the tops of columns and to almost inaccessible solitudes upon the pinnacles of the highest rocks. It offers a much more convenient and secure retreat than was selected by an ascetic who pitched his residence upon the architrave of a temple

in the vicinity of Athens. The heat, according to Fahrenheit's thermometer at the time of our coming, did not exceed eighty-four degrees; and the same temperature continued during the time we remained, a strong wind blowing from the north-west. The view from this eminence amply fulfilled our expectation; nor do the accounts which have been given of it, as it appears at this season of the year, exaggerate the novelty and grandeur of the sight. All the region towards Cairo and the Delta resembles a sea covered with innumerable islands. Forests of palm-trees were seen standing in the water, the inundation spreading over the land where they stood, so as to give them an appearance of growing in the flood. To the north, as far as the eye could reach, nothing could be discerned but a watery surface thus diversified by plantations and by villages. To the south we saw the Pyramids of Saccára; and upon the east of these, smaller monuments of the same kind near to the Nile. An appearance of ruins might indeed be traced the whole way from the Pyramids of Djiza to those of Saccára, as if they had once been connected, so as to constitute one vast cemetery. Beyond the Pyramids of Saccára we could perceive the distant mountains of the Said; and upon an eminence near the Libyan side of the Nile, appeared a monastery of considerable size. Toward the west and south-west, the eye ranged over the great Libyan Desert, extending to the utmost verge of the horizon, without a single object to interrupt the dreary horror of the landscape, except dark floating spots caused by the shadows of passing clouds upon the sand.

Upon the south-east side is the gigantic statue of the Sphinx, the most colossal piece of sculpture which remains of all the works executed by the ancients. The French have uncovered all the pedestal of this statue, and all the cumbent or leonine parts of the figure; these were before entirely concealed by sand. Instead, however, of answering the expectations raised concerning the work upon which it was supposed to rest, the pedestal proves to be a wretched substructure of brick-work and small pieces of stone put to-

gether, like the most insignificant piece of modern masonry, and wholly out of character both with respect to the prodigious labor bestowed upon the statue itself, and the gigantic appearance of the surrounding objects. Beyond the Sphinx we distinctly discerned, amidst the sandy waste, the remains and vestiges of a magnificent building, perhaps the Serapeum.

Immediately beneath our view, upon the eastern and western side, we saw so many tombs that we were unable to count them, some being half-buried in the sand, others rising considerably above it. All these are of an oblong form, with sides sloping like the roofs of European houses. A plan of their situation and appearance is given in Pocock's "Travels." The second pyramid, standing to the south-west, has the remains of a covering near its vertex, as of a plaiting of stone which had once invested all its four sides. Some persons, deceived by the external hue of this covering, have believed it to be made of marble; but its white appearance is owing to a partial decomposition affecting the surface only. Not a single fragment of marble can be found anywhere near this pyramid. It is surrounded by a paved court, having walls on the outside, and places as for doors or portals in the walls; also an advanced work or portico. A third pyramid, of much smaller dimensions than the second, appears beyond the Sphinx to the south-west; and there are three others, one of which is nearly buried in the sand, between the large pyramid and this statue to the south-east.

AFRICA

Pharaoh's Tomb

By GIOVANNI BATTISTA BELZONI

THE burial-place of the great city of a hundred gates was at the foot of the Libyan Mountains, on the west of Thebes. Every part of these rocks is cut out by art, in the form of large and small chambers, each of which has its separate entrance; and, though they are very close to each other, it is seldom that there is any interior communication from one to another. I can truly say it is impossible to give any description sufficient to convey the smallest idea of these subterranean abodes and their inhabitants. There are no sepulchers in any part of the world like them; there are no excavations or mines that can be compared to these truly astonishing places; and no exact description can be given of their interior, owing to the difficulty of visiting these recesses.

A traveler is generally satisfied when he has seen the large hall, the gallery, the staircase, and as far as he can conveniently go; besides he is taken up with the strange works he sees cut in various places and painted on each side of the walls; so that when he comes to a narrow and difficult passage, or to have to descend to the bottom of a well or cavity, he declines taking such trouble, naturally supposing that he cannot see in these abysses anything so magnificent as what he sees above, and consequently deeming it useless to proceed any farther. Of some of these tombs many persons could not withstand the suffocating air, which

often causes fainting. A vast quantity of dust rises, so fine that it enters the throat and nostrils, and chokes the throat and mouth to such a degree that it requires great power of lungs to resist it and the strong effluvia of the mummies. This is not all; the entry or passage where the bodies are is roughly cut in the rocks, and the falling of sand from the upper part or ceiling of the passage causes it to be nearly filled up.

In some places there is not more than the vacancy of a foot left, which you must contrive to pass through in a creeping posture, like a snail, on pointed and keen stones that cut like glass. After getting through these passages, some of them two or three hundred yards long, you generally find a more commodious place, perhaps high enough to sit. But what a place of rest! surrounded by bodies, by heaps of mummies, in all directions, which, previous to my being accustomed to the sight, impressed me with horror. The blackness of the wall; the faint light given by the candles or torches for want of air; the different objects that were around me seeming to converse with each other; and the Arabs with the torches or candles in their hands, naked and covered with dust, themselves resembling living mummies, absolutely formed a scene that cannot be described.

In such a situation I found myself several times, and often returned exhausted and fainting, until at last I became inured to it, and indifferent to what I suffered except from the dust, which never failed to choke my throat and nose; and though fortunately I am destitute of the sense of smelling, I could taste that the mummies were rather unpleasant to swallow. After the exertion of entering such a place, after a passage of fifty, a hundred, three hundred, or perhaps six hundred yards, nearly overcome, I sought a resting-place, found one, and contrived to sit; but when my weight bore on the body of an Egyptian, it crushed it like a band-box. I naturally had recourse to my hands to sustain my weight; but they found no better support, so that I sank among the broken mummies with a crash of bones, rags, and wooden cases, which raised such a dust as kept me motion-

less for a quarter of an hour, waiting until it subsided again. I could not move from the place, however, without increasing it, and every step I took crushed a mummy in some part or other.

Once I was conducted from such a place to another resembling it through a passage of about twenty feet in length, and no wider than that the body could be forced through. It was choked with mummies, and I could not pass without putting my face in contact with that of some decayed Egyptian; but as the passage inclined downward, my own weight helped me on. However, I could not help being covered with bones, legs, arms and heads rolling from above me. Thus I proceeded from one cave to another, all full of mummies, piled up in various ways, some standing, some lying, and some on their heads. The purpose of my researches was to rob the Egyptians of their papyri, of which I found a few hidden in their breasts, under their arms, and in the space above the knees, or on the legs, and covered by the numerous folds of cloth that envelop the mummy.

On October 16, 1817, I recommenced my excavations in the valley of Beban el Malook, and pointed out the fortunate spot which has paid me for all the trouble I took in my researches. . . . Not fifteen yards from the last tomb I described, I caused the earth to be opened at the foot of a steep hill, and under a torrent, which, when it rains, pours a great quantity of water over the very spot I have caused to be dug. No one could imagine that the ancient Egyptians would make the entrance into such an immense and superb excavation just under a torrent of water; but I had strong reasons to suppose that there was a tomb in that place, from indications I had observed in my pursuit. The Fellahs who were accustomed to dig were all of opinion that there was nothing in that spot, as the situation of this tomb differed from that of any other. I continued the work, however, and the next day, the 17th, in the evening, we reached the part of the rock that was cut and formed the entrance.

It was eighteen feet below ground and led to a corridor.

I perceived immediately by the painting on the ceiling, and by the hieroglyphics in *basso-rilievo*, which were to be seen where the earth did not reach, that this was the entrance to a large and magnificent tomb. At the end of this corridor I came to a staircase twenty-three feet long and of the same breadth as the corridor—eight feet eight inches. The door at the bottom is twelve feet high. From the foot of the staircase I entered another corridor, thirty-seven feet three inches long, and of the same width and height as the other, each side sculptured with hieroglyphics in *basso-rilievo*, and painted. The ceiling also is finely painted, and in pretty good preservation. . . .

When we had passed through a little aperture in the wall we found ourselves in a beautiful hall, twenty-seven feet six inches by twenty-five feet ten inches, in which were four pillars three feet square. At the end of this room, which I call the Entrance-Hall, and opposite the aperture, is a large door, from which three steps lead down into a chamber with two pillars. This is twenty-eight feet two inches by twenty-five feet six inches. The pillars are three feet ten inches square. I gave it the name of the Drawing-Room; for it is covered with figures which, though only outlined, are so fine and perfect that you would think they had been drawn only the day before.

Returning into the Entrance-Hall, we saw on the left of the aperture a large staircase, which descended into a corridor. It is thirteen feet four inches long, seven and a half wide, and has eighteen steps. At the bottom we entered a beautiful corridor, thirty-six feet six inches by six feet eleven inches. We perceived that the paintings became more perfect as we advanced farther into the interior. They retained their gloss, or a kind of varnish over the colors, which had a beautiful effect. The figures are painted on a white ground.

At the end of this corridor we descended ten steps, which I call the small stairs, into another, seventeen feet two inches by ten feet five inches. From this we entered a small chamber, twenty feet four inches by thirteen feet eight

inches, to which I gave the name of the Room of Beauties; for it is adorned with the most beautiful figures in *basso-rilievo*, like all the rest, and painted. When standing in the center of this chamber, the traveler is surrounded by an assembly of Egyptian gods and goddesses.

Proceeding farther, we entered a large hall, twenty-seven feet nine inches by twenty-six feet ten inches. In this hall are two rows of square pillars, three on each side of the entrance, forming a line with the corridors. At each side of this hall is a small chamber: that on the right is ten feet five inches by eight feet eight inches; that on the left ten feet five inches by eight feet nine inches and a half. This hall I termed the Hall of Pillars; the little room on the right Isis's Room, as in it a large cow is painted, of which I shall give a description hereafter; that on the left, the Room of Mysteries, from the mysterious figures it exhibits.

At the end of this hall we entered a large saloon, with an arched roof or ceiling, which is separated from the Hall of Pillars only by a step; so that the two may be reckoned one. The saloon is thirty-one feet ten inches by twenty-seven feet. On the right of the saloon is a small chamber without anything in it, roughly cut, as if unfinished, and without painting; on the left we entered a chamber with two square pillars, twenty-five feet eight inches by twenty-two feet ten inches. This I called the Sideboard Room, as it has a projection of three feet in form of a sideboard all around, which was perhaps intended to contain the articles necessary for the funeral ceremony. The pillars are three feet four inches square, and the whole beautifully painted as the rest.

At the same end of the room, and facing the Hall of Pillars, we entered by a large door into another chamber with four pillars, one of which is fallen down. This chamber is forty-three feet four inches by seventeen feet six inches; the pillars three feet seven inches square. It is covered with white plaster where the rock did not cut smoothly, but there is no painting on it. I named it the Bull's or Apis's

Room, as we found the carcass of a bull in it, embalmed with asphaltum; and also, scattered in various places, an immense quantity of small wooden figures of mummies six or eight inches long, and covered with asphaltum to preserve them. There were some other figures of fine earth baked, colored blue, and strongly varnished. On each side of the two little rooms were some wooden statues standing erect, four feet high, with a circular hollow inside, as if to contain a roll of papyrus, which I have no doubt they did. We found likewise fragments of other statues of wood and of composition.

But the description of what we found in the center of the saloon, and which I have reserved till this place, merits the most particular attention, not having its equal in the world, and being such as we had no idea could exist. It is a sarcophagus of the finest oriental alabaster, nine feet five inches long, and three feet seven inches wide. Its thickness is only two inches; and it is transparent when a light is placed in the inside of it. It is minutely sculptured within and without with several hundred figures, which do not exceed two inches in height, and represent, as I suppose, the whole of the funeral procession and ceremonies relating to the deceased, united with several emblems, etc.

I cannot give an adequate idea of this beautiful and invaluable piece of antiquity, and can only say that nothing has been brought into Europe from Egypt that can be compared with it. The cover was not there; it had been taken out and broken into several pieces, which we found in digging before the first entrance. The sarcophagus was over a staircase in the center of the saloon, which communicated with a subterranean passage, leading downward, three hundred feet in length. . . .

The wall was previously made as smooth as possible, and where there were flaws in the rock the vacuum was filled up with cement, which, when hard, was cut along with the rest of the rock. Where a figure or anything else was required to be formed, the sculptor appears to have made his first sketches of what was intended to be cut out.

When the sketches were finished in red lines by the first artist, another more skillful corrected the errors, if any, and his lines were made in black, to be distinguished from those which were imperfect. When the figures were thus prepared, the sculptor proceeded to cut out the stone all round the figure, which remained in *basso-rilievo*, some to the height of half an inch and some much less, according to the size of the figure. For instance, if a figure were as large as life, its elevation was generally half an inch; if the figure were not more than six inches in length, its projection would not exceed the thickness of a dollar, or perhaps less.

The angles of the figures were all smoothly rounded, which makes them appear less prominent than they really are. The parts of the stone that were to be taken off all around the figure did not extend much farther, as the wall is thickly covered with figures and hieroglyphics, and I believe there is not a space on these walls more than a foot square without some figure or hieroglyphic. The garments, and various parts of the limbs, were marked by a narrow line, not deeper than the thickness of a half-crown, but so exact that it produced the intended effect.

When the figures were completed and made smooth by the sculptor, they received a coat of whitewash all over. This white is so beautiful and clear, that our best and whitest paper appeared yellowish when compared with it. The painter came next and finished the figure. It would seem as if they were unacquainted with any color to imitate the naked parts, since red is adopted as a standing color for all that meant flesh. There are some exceptions, indeed; for in certain instances, when they intended to represent a fair lady, by way of distinguishing her complexion from that of the men, they put on a yellow color to represent her flesh; yet it cannot be supposed that they did not know how to reduce their red paints to a flesh color, for on some occasions, where the red flesh is supposed to be seen through a thin veil, the tints are nearly of the natural color, if we suppose the Egyptians to have been of the same hue

as their successors, the present Copts, some of whom are nearly as fair as the Europeans.

Their garments were generally white, and their ornaments formed the most difficult part, when the artists had to employ red in the distribution of the four colors, in which they were very successful. When the figures were finished, they appear to have laid on a coat of varnish; though it may be questioned whether the varnish were thus applied, or incorporated with the color. The fact is that nowhere else except in this tomb is the varnish to be observed, as no place in Egypt can boast of such preservation, nor can the true customs of the Egyptians be seen anywhere else with greater accuracy. . . .

Immediately within the entrance into the first passage, on the left hand, are two figures as large as life, one of which appears to be the hero entering into the tomb. He is received by a deity with a hawk's head, on which are the globe and serpent. Both figures are surrounded by hieroglyphics; and, farther on, near the ground, is a crocodile very neatly sculptured. The walls on both sides of this passage are covered with hieroglyphics, which are separated by lines from the top to the bottom, at the distance of five or six inches from one another. Within these lines the hieroglyphics form their sentences; and it is plainly to be seen that the Egyptians read from the top to the bottom, and then recommenced at the top. The ceiling of this first passage is painted with the figure of the eagles. . . .

In the front of this first hall, facing the entrance, is one of the finest compositions that was ever made by the Egyptians, for nothing like it can be seen in any part of Egypt. It consists of four figures as large as life. The god Osiris sits upon his throne, receiving the homages of a hero, who is introduced by a hawk-headed deity. Behind the throne is a female figure as if in attendance on the great god. The whole group is surrounded by hieroglyphics, and enclosed in a frame richly adorned with symbolical figures. The winged globe is above, with the wings spread over all, and a line of serpents crowns the whole. The figures and paint-

ings are in such perfect preservation that they give the most correct idea of their ornaments and decorations. . . .

On going out of this second chamber into the first hall is a staircase, which leads into a lower passage, the entrance into which is decorated with two figures on each side, a male and a female, as large as life. The female appears to represent Isis, having, as usual, the horns and globe on her head. She seems ready to receive the hero, who is about to enter the regions of immortality. The garments of this figure are so well preserved that nothing which has yet been brought before the public can give a more correct idea of Egyptian costumes. The figure of the hero is covered with a veil, or transparent linen, folded over his shoulder.

AFRICA

The Great Albert Nyanza

By SIR SAMUEL BAKER

MY men appeared in high spirits at the prospect of joining so large a party as that of Mahamed, which mustered about two hundred men.

At that time I really placed dependence upon the professions of Mahamed and his people ; they had just brought Speke and Grant with them, and had received from them presents of a first-class double-barreled gun and several valuable rifles. I had promised not only to assist them in their ivory expeditions, but to give them something very handsome in addition, and the fact of my having upward of forty men as escort was also an introduction, as they would be an addition to the force, which is a great advantage in hostile countries. Everything appeared to be in good train, but I little knew the duplicity of these Arab scoundrels. At the very moment that they were most friendly, they were plotting to deceive me, and to prevent me from entering the country. They knew that, should I penetrate the interior, the ivory trade of the White Nile would be no longer a mystery, and that the atrocities of the slave trade would be exposed, and most likely be terminated by the intervention of European Powers ; accordingly they combined to prevent my advance, and to overthrow my expedition completely. The whole of the men belonging to the various traders were determined that no Englishman should penetrate into the country; accordingly they fraternized with my

escort, and persuaded them that I was a Christian dog, that it was a disgrace for a Mohammedan to serve; that they would be starved in my service, as I would not allow them to steal cattle; that they would have no slaves; and that I should lead them—God knew where—to the sea, from whence Speke and Grant had started. . . .

Among my people were two blacks: one, Richarn already described as having been brought up by the Austrian Mission at Khartoum; the other, a boy of twelve years old, Saat. As these were the only really faithful members of the expedition, it is my duty to describe them. Richarn was an habitual drunkard, but he had his good points; he was honest, and much attached to both master and mistress. He had been with me for some months, and was a fair sportsman, and being of an entirely different race from the Arabs, he kept himself apart from them, and fraternized with the boy Saat.

Not only was the latter boy trustworthy, but he had an extraordinary amount of moral in addition to physical courage. If any complaint were made, and Saat was called as a witness—far from the shyness too often evinced when the accuser is brought face to face with the accused—such was Saat's proudest moment; and, no matter who the man might be, the boy would challenge him, regardless of all consequences. We were very fond of this boy; he was thoroughly good; and in that land of iniquity, thousands of miles away from all except what was evil, there was a comfort in having some one innocent and faithful, in whom to trust.

One morning I had returned to the tent after having, as usual, inspected the transport animals, when I observed Mrs. Baker looking extraordinarily pale, and immediately upon my arrival she gave orders for the presence of the vakeel (headman). There was something in her manner, so different from her usual calm, that I was utterly bewildered when I heard her question the vakeel whether the men were willing to march. Perfectly ready, was the reply. "Then order them to strike the tent, and load the animals;

we start this moment." The man appeared confused, but not more so than I. Something was evidently on foot, but what I could not conjecture. The vakeel wavered, and to my astonishment I heard the accusation made against him, that, "during the night, the whole of the escort had mutinously conspired to desert me, with my arms and ammunition that were in their hands, and to fire simultaneously at me should I attempt to disarm them." At first this charge was indignantly denied, until the boy Saat manfully stepped forward and declared that the conspiracy was entered into by the whole of the escort, and that both he and Richarn, knowing that mutiny was intended, had listened purposely to the conversation during the night ; at daybreak the boy reported the fact to his mistress. Mutiny, robbery, and murder were thus deliberately determined, but I promptly dismissed them as mutineers.

We now took a different road. My wife and I rode about a quarter of a mile at the head of the party as an advance-guard, to warn the caravan of any difficulty. The very nature of the country declared that it must be full of ravines, and yet I could not help hoping against hope that we might have a clear mile of road without a break. The evening had passed, and the light faded. What had been difficult and tedious during the day, now became most serious—we could not see the branches of hooked thorns that overhung the broken path; I rode in advance, my face and arms bleeding with countless scratches, while at each rip of a thorn I gave a warning shout—"Thorn!" for those behind, and a cry of "Hole!" for any deep rut that lay in the path. It was fortunately moonlight, but the jungle was so thick that the narrow track was barely perceptible: thus both camels and donkeys ran against the trunks of trees, smashing the luggage, and breaking all that could be broken; nevertheless, the case was urgent; march we must, at all hazards.

For a long time we sat gazing at the valley before us in which our fate lay hidden, feeling thankful that we had thus checkmated the brutal Turks. Not a sound was heard of

our approaching camels; the delay was most irksome. There were many difficult places that we had passed through, and each would be a source of serious delay to the animals.

At length we heard them in the distance. We could distinctly hear the men's voices, and we rejoiced that they were approaching the last remaining obstacle; that one ravine passed through, and all before would be easy. I heard the rattling of the stones as they drew nearer; and, looking toward the ravine, I saw emerge from the dark foliage of the trees within fifty yards of us the hated red flag and crescent, leading the Turks' party! We were outmarched!

One by one, with scowling looks, the insolent scoundrels filed by us within a few feet, without making the customary salaam; neither noticing us in any way, except by threatening to shoot the latooka, our guide, who had formerly accompanied them. At length their leader, Ibrahim, appeared in the rear of the party. He was riding on a donkey, being the last of the line, behind the flag that closed the march.

I never saw a more atrocious countenance than that exhibited in this man. A mixed breed, between a Turk sire and an Arab mother, he had the good features and bad qualities of either race. The fine, sharp, high-arched nose and large nostril; the pointed and projecting chin; rather high cheek-bones and prominent brow, overhanging a pair of immense black eyes full of expression of all evil. As he approached he took no notice of us, but studiously looked straight before him with the most determined insolence.

The fate of the expedition was, at this critical moment, retrieved by Mrs. Baker. She implored me to call him, to insist upon a personal explanation, and to offer him some present in the event of establishing amicable relations. I could not condescend to address the sullen scoundrel. He was in the act of passing us, and success depended upon that instant. Mrs. Baker herself called him. For the moment he made no reply; but, upon my repeating the call in a loud key, he turned his donkey toward us and dis-

RUINS OF THE TEMPLE OF ISIS ON THE ISLE OF PHILÆ

mounted. I ordered him to sit down, as his men were ahead and we were alone.

The following dialogue passed between us after the usual Arab mode of greeting. I said, "Ibrahim, why should we be enemies in the midst of this hostile country? We believe in the same God, why should we quarrel in this land of heathens, who believe in no God? You have your work to perform; I have mine. You want ivory; I am a simple traveler; why should we clash? If I were offered the whole ivory of the country, I would not accept a single tusk, nor interfere with you in any way. Transact your business, and don't interfere with me; the country is wide enough for us both. I have a task before me, to reach a great lake —the head of the Nile. Reach it I will (Inshallah). No power shall drive me back. If you are hostile, I will imprison you in Khartoum; if you assist me, I will reward you far beyond any reward you have ever received. Should I be killed in this country, you will be suspected; you know the result; the Government would hang you on the bare suspicion. On the contrary, if you are friendly, I will use my influence in any country that I discover, that you may procure its ivory for the sake of your master Koorshid, who was generous to Captains Speke and Grant, and kind to me. Should you be hostile, I shall hold your master responsible as your employer. Should you assist me, I will befriend you both. Choose your course frankly, like a man—friend or enemy?"

Before he had time to reply, Mrs. Baker addressed him much in the same strain, telling him that he did not know what Englishmen were; that nothing would drive them back; that the British government watched over them wherever they might be, and that no outrage could be committed with impunity upon a British subject. That I would not deceive him in any way; that I was not a trader; and that I should be able to assist him materially by discovering new countries rich in ivory, and that he would benefit himself personally by civil conduct.

He seemed confused, and wavered. I immediately prom-

ised him a new double-barreled gun and some gold, when my party should arrive, as an earnest of the future.

He replied that he did not himself wish to be hostile, but that all the trading parties, without one exception, were against me, and that the men were convinced that I was a consul in disguise, who would report to the authorities at Khartoum all the proceedings of the traders. He said also that he believed me, but that his men would not; that all people told lies in their country, therefore no one was credited for the truth. "However," said he, "do not associate with my people, or they may insult you, but go and take possession of that tree (pointing to one in the valley of Ellyria) for yourself and people, and I will come there and speak with you. I will now join my men, as I do not wish them to know that I have been conversing with you." He then made a salaam, mounted his donkey, and rode off.

I had won him. I knew the Arab character so thoroughly that I was convinced that the tree he had pointed out, followed by the words, "I will come there and speak with you," was to be the rendezvous for the receipt of the promised gun and money. He was friendly after this, but the men showed an ugly temper. . . .

Pretending not to notice Bellaal, who was now, as I had suspected, once more the ringleader, for the third time I ordered the men to rise immediately, and to load the camels. Not a man moved, but the fellow Bellaal marched up to me, and looking me straight in the face dashed the butt-end of his gun in defiance on the ground, and led the mutiny. "Not a man shall go with you!—go where you like with Ibrahim, but we won't follow you nor move a step farther. The men shall not load the camels; you may employ the 'niggers' to do it, but not us."

I looked at this mutinous rascal for a moment; this was the burst of the conspiracy, and the threats and insolence that I had been forced to pass over for the sake of the expedition all rushed before me. "Lay down your gun!" I thundered, "and load the camels!"—"I won't!" was his reply. "Then stop here!" I answered; at the same time

lashing out as quick as lightning with my right hand upon his jaw.

He rolled over in a heap, his gun flying some yards from his hand; and the late ringleader lay apparently insensible among the luggage, while several of his friends ran to him, and did the good Samaritan. Following up on the moment the advantage I had gained by establishing a panic, I seized my rifle and rushed into the midst of the wavering men, catching first one by the throat, and then another, and dragging them to the camels, which I insisted upon their immediately loading. All except three, who attended to the ruined ringleader, mechanically obeyed. Richarn and Sali both shouted to them to "hurry"; and the vakeel arriving at this moment and seeing how matters stood, himself assisted, and urged the men to obey.

The first deserters met defeat in their slave raid. It was in vain that they fought; every bullet aimed at a Latooka struck a rock, behind which the enemy was hidden. Rocks, stones, and lances were hurled at them from all sides and from above; they were forced to retreat. The retreat ended in a panic and precipitate flight. Hemmed in on all sides, amidst a shower of lances and stones thrown from the mountain above, the Turks fled down the rocky and precipitous ravines. Mistaking their route, they came to a precipice from which there was no retreat. The screaming and yelling savages closed around them. Fighting was useless; the natives, under cover of the numerous detached rocks, offered no mark for an aim; while the crowd of armed savages thrust them forward with wild yells to the very verge of the great precipice about five hundred feet below. Down they fell! hurled to utter destruction by the mass of Latookas pressing onward! A few fought to the last; but one and all were at length forced, by sheer pressure, over the edge of the cliff, and met a just reward for their atrocities.

My men were almost green with awe when I asked them, solemnly, "Where are those men who deserted from me?" Without answering a word they brought two of my guns and laid them at my feet. They were covered

with clotted blood mixed with sand, which had hardened like cement over the locks and various portions of the barrels. My guns were all marked. As I looked at the numbers upon the stocks, I repeated aloud the names of the owners. "Are they all dead?" I asked. "None of the bodies can be recovered," faltered my vakeel. "The two guns were brought from the spot by some natives who escaped, and who saw the men fall. They are all killed." "Better for them had they remained with me and done their duty. The hand of God is heavy," I replied. My men slunk away abashed, leaving the gory witnesses of defeat and death on the ground. I called Saat and ordered him to give the two guns to Richarn to clean.

Not only my own men but the whole of Ibrahim's party were of the opinion that I had some mysterious connection with the disaster that had befallen my mutineers. All remembered the bitterness of my prophecy, "The vultures will pick their bones," and this terrible mishap having occurred so immediately afterward took a strong hold upon their superstitious minds. As I passed through the camp, the men would quietly exclaim, "Wah Illahi Hawaga!" (My Good Master.) To which I simply replied, "Robiné fe!"(There is a God.) From that moment I observed an extraordinary change in the manner of both my people and those of Ibrahim, all of whom now paid us the greatest respect. . . .

Our course lay across a stream in the center of a marsh, and although deep, it was so covered with thickly-matted water-grass and other aquatic plants, that a natural floating bridge was established by a carpet of weeds about two feet thick; upon this waving and unsteady surface the men ran quickly across, sinking merely to the ankles, although beneath the tough vegetation there was deep water. It was equally impossible to ride or to be carried over this treacherous surface; thus I led the way, and begged Mrs. Baker to follow me on foot as quickly as possible, precisely in my track. The river was about eight yards wide, and I had scarcely completed a fourth of the distance and looked back

to see if my wife followed close to me, when I was horrified to see her standing in one spot, and sinking gradually through the weeds, while her face was distorted and perfectly purple. Almost as soon as I perceived her she fell as though shot dead.

In an instant I was by her side, and with the assistance of eight or ten of my men, who were fortunately close to me, I dragged her like a corpse through the yielding vegetation, and up to our waists we scrambled across to the other side, just keeping her head above the water ; to have carried her would have been impossible, as we should all have sunk together through the weeds. I laid her under a tree, and bathed her head and face with water, as for the moment I thought she had fainted ; but she lay perfectly insensible, as though dead, with teeth and hands firmly clinched, and her eyes open, but fixed. It was a *coup de soleil*.

We bore her to a miserable native village, where we could not procure anything to eat. It was impossible to remain; the people would have starved. She was laid gently upon her litter, and we started forward on our funereal course. I was ill and broken-hearted, and I followed by her side through the long day's march over wild park-lands and streams, with thick forests and deep marshy bottoms ; over undulating hills, and through valleys of tall papyrus rushes, which, as we brushed through them on our melancholy way, waved over the litter like the black plumes of a hearse.

We halted at a village, and again the night was passed in watching. I was wet, and coated with mud from the swampy marsh, and shivered with ague ; but the cold within was greater than all. No change had taken place; she had never moved. I had plenty of fat, and I made four balls of about half a pound, each of which would burn for three hours. A piece of a broken water-jar formed a lamp, several pieces of rag serving for wicks. So in solitude the still calm night passed away as I sat by her side and watched. In the drawn and distorted features that lay before me I

could hardly trace the same face that for years had been my comfort through all the difficulties and dangers of my path. Was she to die? Was so terrible a sacrifice to be the result of my selfish exile!

Again the night passed away. Once more the march. Though weak and ill, and for two nights without a moment's sleep, I felt no fatigue, but mechanically followed by the side of the litter as though in a dream. The same wild country diversified with marsh and forest. Again we halted. The night came, and I sat by her side in a miserable hut, with the feeble lamp flickering while she lay as in death. She had never moved a muscle since she fell. My people slept. I was alone, and no sound broke the stillness of the night. The ears ached at the utter silence, till the sudden wild cry of an hyena made me shudder as the horrible thought rushed through my brain that, should she be buried in this lonely spot, the hyena would . . . disturb her rest.

The morning was not far distant; it was past four o'clock. I had passed the night in replacing wet cloths upon her head and moistening her lips, as she lay apparently lifeless on her litter. I could do nothing more; in solitude and abject misery in that dark hour, in a country of savage heathens, thousands of miles away from a Christian land, I beseeched an aid above all human, trusting alone to Him.

The morning broke; my lamp had just burnt out, and, cramped with the night's watching, I rose from my low seat, and, seeing that she lay in the same unaltered state, I went to the door of the hut to breathe one gasp of the fresh morning air. I was watching the first red streak that heralded the rising sun, when I was startled by the words "Thank God!" faintly uttered behind me. Suddenly she had awakened from her torpor, and with a heart overflowing I went to her bedside. Her eyes were full of madness! She spoke; but the brain was gone!

I will not inflict a description of the terrible trial of seven days of brain fever, with its attendant horrors. The rain poured in torrents, and day after day we were forced to

travel, for want of provisions, not being able to remain in one position. Every now and then we shot a few guinea-fowl, but rarely; there was no game, although the country was most favorable. In the forests we procured wild honey; but the deserted villages contained no supplies, as we were on the frontier of Uganda, and Mtesa's people had plundered the district. For seven nights I had not slept, and although as weak as a reed, I had marched by the side of her litter. Nature could resist no longer. We reached a village one evening ; she had been in violent convulsions successively; it was all but over. I laid her down on her litter within a hut; covered her with a Scotch plaid; and I fell upon my mat insensible, worn out with sorrow and fatigue. My men put a new handle to the pickaxe that evening ,and sought for a dry spot to dig her grave !

The sun had risen when I woke. I had slept, and, horrified as the idea flashed upon me that she must be dead, and that I had not been with her, I started up. She lay upon her bed, pale as marble, and with that calm serenity that the features assume when the cares of life no longer act upon the mind, and the body rests in death. The dreadful thought bowed me down; but as I gazed upon her in fear, her chest gently heaved, not with the convulsive throbs of fever, but naturally. She was asleep; and when at a sudden noise she opened her eyes, they were calm and clear. She was saved! When not a ray of hope remained, God alone knows what helped us. The gratitude of that moment I will not attempt to describe. . . .

AFRICA

Finding the Source of the Nile

By SIR SAMUEL BAKER

FOR several days past our guides had told us that we were very near to the lake, and we were now assured that we should reach it on the morrow. I had noticed a lofty range of mountains at an immense distance west, and I had imagined that the lake lay on the other side of this chain; but I was now informed that those mountains formed the western frontier of the M'wootan N'zigé, and that the lake was actually within a march of Parkani. I could not believe it possible that we were so near the object of our search. The guide Rabonga now appeared, and declared that if we started early on the following morning we should be able to wash in the lake by noon!

That night I hardly slept. For years I had striven to reach the "sources of the Nile." In my nightly dreams during that arduous voyage I had always failed, but after so much hard work and perseverance the cup was at my very lips, and I was to drink at the mysterious fountain before another sun should set—at that great reservoir of Nature that ever since creation had baffled all discovery.

I had hoped, and prayed, and striven through all kinds of difficulties, in sickness, starvation, and fatigue, to reach that hidden source; and when it had appeared impossible, we had both determined to die upon the road rather than return defeated. Was it possible that it was so near, and that to-morrow we could say, The work is accomplished?

March 14.—The sun had not risen when I was spurring my ox after the guide, who, having been promised a double handful of beads on arrival at the lake, had caught the enthusiasm of the moment. The day broke beautifully clear, and having crossed a deep valley between the hills, we toiled up the opposite slope. I hurried to the summit. The glory of our prize burst suddenly upon me! There, like a sea of quicksilver, lay far beneath the grand expanse of water—a boundless sea horizon on the south and south-west, glittering in the noonday sun; and on the west at fifty or sixty miles' distance blue mountains rose from the bosom of the lake to a height of about 7000 feet above its level.

It is impossible to describe the triumph of that moment —here was the reward for all our labor—for the years of tenacity with which we had toiled through Africa. England had won the source of the Nile! Long before I reached this spot I had arranged to give three cheers with all our men in English style in honor of the discovery, but now that I looked down upon the great inland sea lying nestled in the very heart of Africa, and thought how vainly mankind had sought these sources throughout so many ages, and reflected that I had been the humble instrument permitted to unravel this portion of the great mystery when so many greater than I had failed, I felt too serious to vent my feelings in vain cheers for victory, and I sincerely thanked God for having guided and supported us through all dangers to the good end. I was about 1500 feet above the lake, and I looked down from the steep granite cliff upon those welcome waters—upon that vast reservoir which nourished Egypt and brought fertility where all was wilderness—upon that great source so long hidden from mankind; that source of bounty and of blessings to millions of human beings; and as one of the greatest objects in nature, I determined to honor it with a great name. As an imperishable memorial of one loved and mourned by our gracious Queen and deplored by every Englishman, I called this great lake "the Albert Nyanza." The Victoria and the Albert lakes are the two sources of the Nile.

[Elsewhere Baker describes his meeting with Speke and Grant, who had been on the same search.]

I got the report that two white men had come up from the sea with Debono's party. Could they be Speke and Grant? Off I ran, and soon met them in reality. Hurrah for old England! they had come from the Victoria Nyanza, from which the Nile springs. . . . The mystery of ages solved. With my pleasure of meeting them is the one disappointment, that I had not met them farther on the road in my search for them; however, the satisfaction is, that my previous arrangements had been such as would have insured my finding them had they been in a fix. . . . My projected route would have brought me *vis-à-vis* with them, as they had come from the lake by the course I had proposed to take. . . . All my men perfectly mad with excitement; firing salutes as usual with ball-cartridge, they shot one of my donkeys; a melancholy sacrifice as an offering at the completion of this geographical discovery.

When I first met them they were walking along the bank of the river toward my boats. At a distance of about a hundred yards I recognized my old friend Speke, and with a heart beating with joy I took off my cap and gave a welcome hurrah! as I ran toward him. For the moment he did not recognize me; ten years' growth of beard and mustache had worked a change; and as I was totally unexpected, my sudden appearance in the center of Africa appeared to him incredible. I hardly required an introduction to his companion, as we felt already acquainted, and after the transports of this happy meeting we walked together to my diahbiah; my men surrounding us with smoke and noise by keeping up an unremitting fire of musketry the whole way. We were shortly seated on deck under the awning, and such rough fare as could be hastily prepared was set before these two ragged, care-worn specimens of African travel, whom I looked upon with feelings of pride as my own countrymen.

As a good ship arrives in harbor, battered and torn by a long and stormy voyage, yet sound in her frame and

seaworthy to the last, so both these gallant travelers arrived at Gondokoro. Speke appeared the more worn of the two; he was excessively lean, but in reality he was in good tough condition; he had walked the whole way from Zanzibar, never having once ridden during that wearying march. Grant was in honorable rags, his bare knees projecting through the remnants of trousers that were an exhibition of rough industry in tailor's work. He was looking tired and feverish, but both men had a fire in the eye that showed the spirit that had led them through.

They wished to leave Gondokoro as soon as possible, *en route* for England, but delayed their departure until the moon should be in a position for an observation for determining the longitude. My boats were fortunately engaged by me for five months, thus Speke and Grant could take charge of them to Khartoum.

The Falls of the Zambesi

By DAVID LIVINGSTONE

WE bade adieu to our friends at Linyanti, accompanied by Sekeletu and about two hundred followers. We were all fed at his expense, and he took cattle for this purpose from every station we came to. The principal men of the Makololo, Lebeóle, Ntlarié, Nkwatléle, etc., were also of the party. We passed through the patch of the tsetse fly, fatal to beasts, which exists between Linyanti and Sesheke, by night. The majority of the company went on by daylight, in order to prepare our beds. Sekeletu and I, with about forty young men, waited outside the tsetse till dark. We then went forward, and about ten o'clock it became so pitchy dark that both horses and men were completely blinded. The lightning spread over the sky, forming eight or ten branches at a time, in shape exactly like those of a tree. This, with great volumes of sheet-lightning, enabled us at times to see the whole country. The intervals between the flashes were so densely dark as to convey the idea of stone-blindness. The horses trembled, cried out, and turned around, as if searching for each other, and every new flash revealed the men taking different directions, laughing, and stumbling against each other.

While at Sesheke, Sekeletu supplied me with twelve oxen—three of which were accustomed to being ridden upon—hoes and beads to purchase a canoe when we should strike the Leeambye beyond the falls. He likewise pre-

sented abundance of good fresh butter and honey, and did everything in his power to make me comfortable for the journey. I was entirely dependent on his generosity, for the goods I originally brought from the Cape were all expended by the time I set off from Linyanti to the west coast. I there drew £70 of my salary, paid my men with it, and purchased goods for the return journey to Linyanti. These being now all expended, the Makololo again fitted me out, and sent me on to the east coast. I was thus dependent on their bounty, and that of other Africans, for the means of going from Linyanti to Loanda, and again from Linyanti to the east coast, and I feel deeply grateful to them. Coin would have been of no benefit, for gold and silver are quite unknown.

As this was the point from which we intended to strike off to the north-east, I resolved on the following day to visit the Falls of Victoria, called by the natives Mosioatunya, or more anciently Shongwe. Of these we had often heard since we came into the country; indeed, one of the questions asked by Sebituane was, "Have you smoke that sounds in your country?" They did not go near enough to examine them, but, viewing them with awe at a distance, said, in reference to the vapor and noise, "Mosi oa tunya" (smoke does sound there). It was previously called Shongwe, the meaning of which I could not ascertain. The word for a "pot" resembles this, and it may mean a seething caldron, but I am not certain of it. Being persuaded that Mr. Oswell and myself were the very first Europeans who ever visited the Zambesi in the center of the country, and that this is the connecting link between the known and unknown portions of that river, I decided to use the same liberty as the Makololo did, and gave the only English name I have affixed to any part of the country.

Sekeletu intended to accompany me, but one canoe only having come instead of the two he had ordered, he resigned it to me. After twenty minutes' sail from Kalai we came in sight, for the first time, of the columns of vapor appropriately called "smoke," rising at a distance of five or six

miles, exactly as when large tracts of grass are burned in Africa. Five columns now arose, and, bending in the direction of the wind, they seemed placed against a low ridge covered with trees ; the tops of the columns at this distance appeared to mingle with the clouds. They were white below, and higher up became dark, so as to simulate smoke very closely. The whole scene was extremely beautiful; the banks and islands dotted over the river are adorned with sylvan vegetation of great variety of color and form. At the period of our visit several trees were spangled over with blossoms. Some trees resemble the great spreading oak, others assume the character of our own elms and chestnuts ; but no one can imagine the beauty of the view from anything witnessed in England. It had never been seen before by European eyes; but scenes so lovely must have been gazed upon by angels in their flight.

The only want felt is that of mountains in the background. The falls are bounded on three sides by ridges three hundred or four hundred feet in height, which are covered with forest, with the red soil appearing among the trees. When about half a mile from the falls, I left the canoe by which we had come down thus far, and embarked in a lighter one, with men well acquainted with the rapids, who, by passing down the center of the stream in the eddies and still places caused by many jutting rocks, brought me to an island situated in the middle of the river, and on the edge of the lip over which the water rolls. In coming hither there was danger of being swept down by the streams which rushed along on each side of the island ; but the river was now low, and we sailed where it is totally impossible to go when the water is high.

But, though we had reached the island, and were within a few yards of the spot, a view from which would solve the whole problem, I believe that no one could perceive where the vast body of water went; it seemed to lose itself in the earth, the opposite lip of the fissure into which it disappeared being only eighty feet distant. At least I did not comprehend it until, creeping with awe to the verge, I peered down

into a large rent which had been made from bank to bank of the broad Zambesi, and saw that a stream of a thousand yards broad leaped down a hundred feet, and then became suddenly compressed into a space of fifteen or twenty yards.

The entire falls are simply a crack made in a hard basaltic rock from the right to the left bank of the Zambesi, and then prolonged from the left bank away through thirty or forty miles of hills. If one imagines the Thames filled with low, tree-covered hills immediately beyond the tunnel, extending as far as Gravesend, the bed of black basaltic rock instead of London mud, and a fissure made therein from one end of the tunnel to the other down through the keystones of the arch, and prolonged from the left end of the tunnel through thirty miles of hills, the pathway being one hundred feet down from the bed of the river instead of what it is, with the lips of the fissure from eighty to one hundred feet apart, then fancy the Thames leaping bodily into the gulf, and forced there to change its direction, and flow from the right to the left bank, and then rush boiling and roaring through the hills, he may have some idea of what takes place at this, the most wonderful sight I had witnessed in Africa.

In looking down into the fissure on the right of the island, one sees nothing but a dense white cloud, which, at the time we visited the spot, had two bright rainbows on it. The sun was on the meridian, and the declination about equal to the latitude of the place. From this cloud rushed up a great jet of vapor exactly like steam, and it mounted two hundred or three hundred feet high; there condensing, it changed its hue to that of dark smoke, and came back in a constant shower, which soon wetted us to the skin. This shower falls chiefly on the opposite side of the fissure, and a few yards back from the lip there stands a straight hedge of evergreen trees, whose leaves are always wet. From their roots a number of little rills run back into the gulf, but, as they flow down the steep wall there, the column of vapor, in its ascent, licks them up clean off the rock, and away they mount again. They are constantly running down, but never reach the bottom.

On the left of the island we see the water at the bottom, a white rolling mass moving away to the prolongation of the fissure, which branches off near the left bank of the river. A piece of the rock has fallen off a spot on the left of the island, and juts out from the water below, and from it I judged the distance which the water falls to be about one hundred feet. The walls of this gigantic crack are perpendicular, and composed of one homogeneous mass of rock.

On the left side of the island we have a good view of the mass of water which causes one of the columns of vapor to ascend, as it leaps quite clear of the rock, and forms a thick unbroken fleece all the way to the bottom. Its whiteness gave the idea of snow, a sight I had not seen for many a day. As it broke into (if I may use the term) pieces of water, all rushing on in the same direction, each gave off several rays of foam exactly as bits of steel, when burned in oxygen gas, give off rays of sparks. The snow-white sheet seemed like myriads of small comets rushing on in one direction, each of which left behind its nucleus rays of foam. I never saw the appearance referred to noticed elsewhere. It seemed to be the effect of the mass of water leaping at once clear of the rock, and but slowly breaking up into spray.

I have mentioned that we saw five columns of vapor ascending from this strange abyss. They are evidently formed by the compression suffered by the force of the water's own fall into an unyielding wedge-shaped space. Of the five columns, two on the right and one on the left of the island were the largest, and the streams which formed them seemed each to exceed in size the falls of the Clyde at Stonebyres when that river is in flood. This was the period of low water in the Leeambye; but, as far as I could guess, there was a flow of five or six hundred yards of water, which, at the edge of the fall, seemed at least three feet deep.

The fissure is said by the Makololo to be very much deeper farther to the eastward; there is one part at which the walls are so sloping that people accustomed to it can go down by descending in a sitting position. The Makololo

on one occasion, pursuing some fugitive Batoka, saw them, unable to stop the impetus of their flight at the edge, literally dashed to pieces at the bottom. They beheld the stream like a "white cord" at the bottom, and so far down (probably three hundred feet) that they became giddy, and were fain to go away holding on to the ground.

Sekeletu and his large party having conveyed me thus far, and furnished me with a company of one hundred and fourteen men to carry the tusks to the coast, we bade adieu to the Makololo on the twentieth of November and proceeded northward to the Lekone. The country around is very beautiful, and was once well peopled with Batoka, who possessed enormous herds of cattle. When Sebituane came in former times, with his small but warlike party of Makololo, to this sport, a general rising took place of the Batoka through the whole country, in order to "eat him up;" but his usual success followed him, and, dispersing them, the Makalolo obtained so many cattle that they could not take any note of the herds of sheep and goats. The tsetse had been brought by buffaloes into some districts where formerly cattle abounded. This obliged us to travel the first few stages by night. We could not well detect the nature of the country in the dim moonlight; the path, however, seemed to lead along the high bank of what may have been the ancient bed of the Zambesi before the fissure was made. The Lekone now winds in it in an opposite direction to that in which the ancient river must have flowed.

For a few days we traveled over an uninhabited, gently undulating and most beautiful district, the border territory between those who accept and those who reject the sway of the Makololo. The face of the country appears as if in long waves, running north and south. There are no rivers, though water stands in pools in the hollows. We were now come into the country which my people all magnify as a perfect paradise. Sebituane was driven from it by the Matebele. It suited him exactly for cattle, corn, and health. The soil is dry, and often a reddish sand; there are few trees, but fine large shady ones stand dotted here and there

over the country where towns formerly stood. One of the fig family I measured, and found to be forty feet in circumference ; the heart had been burnt out, and some one had made a lodging in it, for we saw the remains of a bed and a fire. The sight of the open country, with the increased altitude we were attaining, was most refreshing to the spirits. Large game abound. We see in the distance buffaloes, elands, hartebeest, gnus, and elephants, all very tame, as no one disturbs them. Lions, which always accompany other large animals, roared about us, but, as it was moonlight, there was no danger. In the evening, while standing on a mass of granite, one began to roar at me, though it was still light.

On the third of December we crossed the river Mozuma, or river of Dila, having traveled through a beautifully undulating pastoral country. To the south, and a little east of this, stands the hill Tabu Chen, or "White Mountains," from a mass of white rock, probably dolomite, on its top. But none of the hills are of any great altitude. The Mozuma, or river of Dila, was the first water-course which indicated that we were now on the slopes toward the eastern coast. It contained no flowing water, but revealed in its banks what gave me great pleasure at the time—pieces of lignite, possibly indicating the existence of a mineral, namely, coal, the want of which in the central country I had always deplored. Again and again we came to the ruins of large towns, containing the only hieroglyphics of this country, worn millstones, with the round ball of quartz with which the grinding was effected. Great numbers of these balls were lying about, showing that the depopulation had been the result of war ; for, had the people removed in peace, they would have taken the balls with them.

When we had passed the outskirting villages, which alone consider themselves in a state of war with the Makololo, we found the Batoka, or Batonga, as they here call themselves, quite friendly. Great numbers of them came from all the surrounding villages with presents of maize and masuka, and expressed great joy at the first appearance of

a white man, and harbinger of peace. The women clothe themselves better than the Balonda, but the men go *in puris naturalibus*. They walk about without the smallest sense of shame.

The farther we advanced, the more we found the country swarming with inhabitants. Great numbers came to see the white man, a sight they had never beheld before. They always brought presents of maize and masuka. Their mode of salutation is quite singular. They throw themselves on their backs on the ground, and rolling from side to side, slap the outside of their thighs as expressions of thankfulness and welcome, uttering the words "Kina bomba." This method of salutation was to me very disagreeable, and I never could get reconciled to it. I called out, "Stop, stop; I don't want that;" but they, imagining I was dissatisfied, only tumbled about more furiously, and slapped their thighs with greater vigor. . . .

As we approached nearer the Zambesi, the country became covered with broad-leaved bushes, pretty thickly planted, and we had several times to shout to elephants to get out of our way. At an open space, a herd of buffaloes came trotting up to look at our oxen, and it was only by shooting one that I made them retreat. The meat is very much like that of an ox, and this one was very fine. The only danger we actually encountered was from a female elephant, with three young ones of different sizes. Charging through the center of our extended lines, and causing the men to throw down their burdens in a great hurry, she received a spear for her temerity. I never saw an elephant with more than one calf before. We knew that we were near our Zambesi, again, even before the great river burst upon our sight, by the numbers of water-fowl we met. I killed four geese with two shots, and, had I followed the wishes of my men, could have secured a meal of water-fowl for the whole party. I never saw a river with so much animal life around and in it, and, as the Barotse say, "Its fish and fowl are always fat." When our eyes were gladdened by a view of its goodly broad waters, we found it

very much larger than it is even above the fall. One might try to make his voice heard across it in vain. Its flow was more rapid than near Sesheke, being often four and a half miles an hour.

MISCELLANEOUS

Manila in the Forties

By CHARLES WILKES

AT daylight, on the thirteenth of January, 1842, we were again under way, with a light air, and at nine o'clock reached the roadstead, where we anchored in six fathoms of water, with good holding ground.

A number of vessels were lying in the roads, among which were several Americans loading with hemp. There was also a large English East Indiaman, manned by Lascars, whose noise rendered her more like a floating Bedlam than anything else to which I can liken it.

The view of the city and country around Manila partakes both of a Spanish and an Oriental character. The somber and heavy-looking churches with their awkward towers ; the long lines of batteries mounted with heavy cannon ; the massive houses, with ranges of balconies ; and the light and airy cottages, elevated on posts, situated in the luxuriant groves of tropical trees—all excite desire to become better acquainted with the country.

Manila is situated on an extensive plain, gradually swelling into distant hills, beyond which, again, mountains rise in the background to the height of several thousand feet. The latter are apparently clothed with vegetation to their summits. The city is in strong contrast to this luxuriant scenery, bearing evident marks of decay, particularly in the churches, whose steeples and tile roofs have a dilapidated look. The site of the city does not appear to have been

well chosen, it having apparently been selected entirely for the convenience of commerce, and the communication that the outlet of the lake affords for the bateaux (freight boats) that transport the produce from the shores of the Laguna de Bay to the city.

There are many arms or branches to this stream, which have been converted into canals ; and almost any part of Manila may now be reached in a banca, a small passage boat.

The canal is generally filled with coasting vessels, bateaux from the lake, and lighters for the discharge of the vessels lying in the roads. The bay of Manila is safe, excepting during the change of the monsoons, when it is subject to the typhoons of the China seas, within whose range it lies. These blow at times with much force and cause great damage. Foreign vessels have, however, kept this anchorage, and weathered these storms in safety; but native as well as Spanish vessels seek at these times the port of Cavité, about three leagues to the south-west, at the entrance of the bay, which is perfectly secure. Here the government dock-yard is situated, and this harbor is consequently the resort of the few gun-boats and galleys that are stationed here.

The entrance to the canal or river Pasig is three hundred feet wide, and is enclosed between two well-constructed piers, which extend for some distance into the bay. On the end of one of these is the light-house, and on the other a guard-house. The walls of these piers are about four feet above ordinary high water, and include the natural channel of the river, whose current sets out with some force, particularly when the ebb is making in the bay.

The suburbs, or Binondo quarter, contain more inhabitants than the city itself, and is the commercial town. They have all the stir and life incident to a large population actively engaged in trade, and in this respect the contrast with the city proper is great.

The city of Manila is built in the form of a large segment of a circle, having the chord of the segment on the river ; the whole is strongly fortified with walls and ditches. The

houses are substantially built after the fashion of the mother country. Within the walls are the governor's palace, custom-house, treasury, admiralty, several churches, convents, and charitable institutions, a university, and the barracks for the troops ; it also contains some public squares, on one of which is a bronze statue of Charles IV.

The city is properly deemed the court residence of these islands ; and all those attached to the government, or who wish to be considered as of the higher circle, reside here ; but foreigners are not permitted to do so. The houses in the city are generally of stone, plastered, and white or yellow washed on the outside. They are only two stories high, and in consequence cover a large space, being built around a patio or court-yard.

The ground floors are occupied as store-houses, stables, and for porters' lodges. The second story is devoted to the dining halls and sleeping apartments, kitchens, bath-rooms, etc. The bed-rooms have the windows down to the floor, opening on wide balconies, with blinds or shutters. These blinds are constructed with sliding frames, having small squares of two inches filled in with a thin semi-transparent shell, a species of *Placuna ;* the fronts of some of the houses have a large number of these small lights, where the females of the family may enjoy themselves unperceived.

After entering the canal, we very soon found ourselves among a motley and strange population. On landing, the attention is drawn to the vast number of small stalls and shops with which the streets are lined on each side, and to the crowds of people passing to and fro, all intent upon their several occupations. The artisans in Manila are almost wholly Chinese; and all trades are local, so that in each quarter of the Binondo suburb the privilege of exclusive occupancy is claimed by some particular kinds of shops. In passing up the Escolta (which is the longest and main street in this district) the cabinet-makers seen busily at work in their shops are first met with ; next to these come the tinkers and blacksmiths ; then the shoemakers, clothiers, fishmongers, haberdashers, etc. These are flanked by out-door

occupations ; and in each quarter are numerous cooks frying cakes, stewing, etc., in movable kitchens ; while here and there are to be seen betel-nut sellers, either moving about to obtain customers, or taking a stand in some great thoroughfare. The moving throng, composed of carriers, waiters, messengers, etc., passes quietly and without any noise ; they are generally seen with the Chinese umbrella, painted of many colors, screening themselves from the sun. The whole population wear slippers and move along with a slip-shod gait.

The Chinese are apparently far more numerous than the Malays, and the two races differ as much in character as in appearance ; one is all activity, while the other is disposed to avoid all exertion. They preserve their distinctive character throughout, mixing but very little with each other, and are removed as far as possible in their civilities; the former, from their industry and perseverance, have almost monopolized all the lucrative employments among the lower orders, excepting the selling of fish and betel-nut, and articles manufactured in the provinces. . . .

Of all her foreign possessions, the Philippines have cost Spain the least blood and labor. The honor of their discovery belongs to Magalhaens, whose name is associated with the straits at the southern extremity of the American continent, but which has no memorial in these islands. Now that the glory which he gained by being the first to penetrate from the Atlantic to the Pacific has been in some measure obliterated by the disuse of those straits by navigators, it would seem due to his memory that some spot among these islands should be set apart to commemorate the name of him who made them known to Europe. This would be but common justice to the discoverer of a region which has been a source of so much honor and profit to the Spanish nation, who opened the vast expanse of the Pacific to the fleets of Europe, and who died fighting to secure the benefits of his enterprise to his king and country.

Few portions of the globe seem to be so much the seat of internal fires, or to exhibit the effects of volcanic action

so strong as the Philippines. During our visit, it was not known that any of the volcanoes were in action; but many of them were smoking, particularly that in the district of Albay, called Isaroc. Its latest eruption was in the year 1839; but this did little damage compared with that of 1814, which covered several villages, and the country for a great distance around, with ashes. This mountain is situated to the south-east of Manila one hundred and fifty miles, and is said to be a perfect cone, with a crater at its apex.

It does not appear that the islands are much affected by earthquakes, although some have occasionally occurred that have done damage to the churches at Manila.

The coal found in the Philippines is deemed of value; it has a strong resemblance to the bituminous coal of our own country, possesses a bright luster, and appears very free from all woody texture when fractured. It is found associated with sandstone, which contains many fossils. Lead and copper are reported as being very abundant; gypsum and limestone occur in some districts. From this it will be seen that these islands have everything in the mineral way to constitute them desirable possessions.

With such mineral resources and a soil capable of producing the most varied vegetation of the tropics, a liberal policy is all that the country lacks. The products of the Philippine Islands consist of sugar, coffee, hemp, indigo, rice, tortoise-shell, hides, ebony, saffron-wood, sulphur, cotton, cordage, silk, pepper, cocoa, wax, and many other articles. In their agricultural operations the people are industrious, although much labor is lost by the use of defective implements. The plow, of a very simple construction, has been adopted from the Chinese; it has no coulter, the share is flat, and being turned partly to one side, answers, in a certain degree the purpose of a mold-board. This rude implement is sufficient for the rich soils, where the tillage depends chiefly upon the harrow, in constructing which a thorny species of bamboo is used. The harrow is formed of five or six pieces of this material, on which the thorns are left, firmly fastened together. It answers its purpose well,

and is seldom out of order. A wrought-iron harrow, that was introduced by the Jesuits, is used for clearing the ground more effectually, and more particularly for the purpose of extirpating a troublesome grass that is known by the name of cogon (a species of *Andropogon*), of which it is very difficult to rid the fields. The bolo or long-knife, a basket, a hoe, complete the implements, and answer all the purposes of our spades, etc.

The buffalo was used until within a few years exclusively in their agricultural operations, and they have lately taken to the use of the ox ; but horses are never used. The buffalo, from the slowness of his motions, and his exceeding restlessness under the heat of the climate, is ill adapted to agricultural labor ; but the natives are very partial to them, notwithstanding they occasion them much labor and trouble in bathing them during the great heat. This is absolutely necessary, or the animal becomes so fretful as to be unfit for use. If it were not for this, the buffalo would, notwithstanding his slow pace, be most effective in agricultural operations ; he requires little food, and that of the coarsest kind ; his strength surpasses that of the stoutest ox, and he is admirably adapted for the rice or paddy fields. They are very docile when used by the natives, and even children can manage them; but it is said they have a great antipathy to the whites and all strangers. The usual mode of guiding them is by a small cord attached to the cartilage of the nose. The yoke rests on the neck before the shoulders, and is of simple construction. To this is attached whatever it may be necessary to draw, either by traces, shafts, or other fastenings. Frequently these animals may be seen with large bundles of bamboo lashed to them on each side. Buffaloes are to be met with on the lake with no more than their noses and eyes out of the water, and are not visible until they are approached within a few feet, when they cause alarm to the passengers by raising their large forms close to the boat. It is said that they resort to the lake to feed on a favorite grass that grows on its bottom in shallow water, and which they dive for. Their flesh is not eaten, except

that of the young ones, for it is tough and tasteless. The milk is nutritious, and of a character between that of the goat and the cow.

Rice is, perhaps, of their agricultural products, the article upon which the inhabitants of the Philippine Islands most depend for food and profit ; of this they have several different varieties, which the natives distinguish by their size and the shape of the grain: the birnambang, lamuyo, malagequit, bontot-cabayo, dumali, quinanda, bolohan, and tangi. The first three are aquatic, the latter five upland varieties. They each have their peculiar uses. The dumali is the early variety ; it ripens in three months from planting, from which circumstance it derives its name; it is raised exclusively on the uplands. Although much esteemed, it is not extensively cultivated, as the birds and insects destroy a large part of the crop.

The malagequit is very much prized, and used for making sweet and fancy dishes; it becomes exceedingly glutinous, for which reason it is used in making whitewash, which it is said to cause to become of a brilliant white, and to withstand the weather. This variety is not, however, believed to be wholesome. There is also a variety of this last species which is used as food for horses, and supposed to be a remedy and preventive against worms.

The rice grounds or fields are laid out in squares, and surrounded by embankments, to retain the water of the rains or streams. After the rains have fallen in sufficient quantities to saturate the ground, a seed-bed is generally planted in one corner of the field, in which the rice is sown broadcast, about the month of June. The heavy rains take place in August, when the fields are plowed, and are soon filled with water. The young plants are about this time taken from the seed-bed, their tops and roots trimmed, and then planted in the field by making holes in the ground with the fingers and placing four or five sprouts in each of them ; in this tedious labor the poor women are employed, whilst the males are lounging in their houses or in the shade of the trees.

The harvest for the aquatic rice begins in December. It is reaped with small sickles, peculiar to the country, called yatap ; to the back of these a small stick is fastened, by which they are held, and the stalk is forced upon it and cut. The spikes of rice are cut with this implement, one by one. In this operation, men, women and children, all take part.

The upland rice requires much more care and labor in its cultivation. The land must be plowed three or four times, and all the turf and lumps well broken up by the harrow.

During its growth it requires to be weeded two or three times, to keep the weeds from choking the crop. The seed is sown broadcast in May. This kind of rice is harvested in November, and to collect the crop is still more tedious than in the other case, for it is always gathered earlier and never reaped, in consequence of the grain not adhering to the ear. If it were gathered in any other way, the loss by transportation on the backs of buffaloes and horses, without any covering to the sheaf, would be so great as to dissipate a great portion of the crop.

After the rice is harvested, there are different modes of treating it. Some of the proprietors take it home, where it is thrown into heaps and left until it is desirable to separate it from the straw, when it is trodden out by men and women with their bare feet. For this operation they usually receive a fifth part of the rice.

Others stack it in a wet and green state, which subjects it to heat, from which cause the grain contracts a dark color and an unpleasant taste and smell. The natives, however, impute these defects to the wetness of the season.

The crop of both the low and upland rice is usually from thirty to fifty for one, this on old land ; but on that which is newly cleared, or which has never been cultivated, the yield is far beyond this. In some soils of the latter description, it is said that for a chupa (seven cubic inches) planted the yield has been a caban. The former is the two-hundred-and-eighth part of the latter. This is not the only

advantage gained in planting rice lands, but the saving of labor is equally great ; for all that is required is to make a hole with the fingers and place three or four grains in it. The upland rice requires but little water, and is never irrigated.

The cultivator in the Philippine Islands is always enabled to secure plenty of manure; for vegetation is so luxuriant that by pulling the weeds and laying them with earth a good stock is quickly obtained with which to cover his fields. Thus, although the growth is so rank as to cause him labor, yet in this hot climate its decay is equally rapid, which tends to make his labors more successful.

Among the important productions of these islands I have mentioned hemp, although the article called Manila hemp must not be understood to be derived from the plant which produces the common hemp (*Canibis*), being obtained from a species of plantain (*Musa textilis*), called in the Philippines "abaca." This is a native of these islands, and was formerly believed to be found only on Mindanao ; but this is not the case, for it is cultivated on the south part of Luzon and all the islands south of it. It grows on high ground, in rich soil, and is propagated by seeds. It resembles the other plants of the tribe of plantains, but its fruit is much smaller, although edible. The fiber is derived from the stem, and the plant attains the height of fifteen or twenty feet. The usual mode of preparing the hemp is to cut off the stem near the ground, before the time or just when the fruit is ripe. The stem is then eight or ten feet long below the leaves, where it is again cut. The outer coating of the herbaceous stem is then stripped off, until the fibers or cellular parts are seen, when it undergoes the process of rotting, and after being well dried in houses and sheds, is prepared for market by assorting it, a task which is performed by the women and children. That which is intended for cloth is soaked for an hour or two in weak lime-water prepared from sea-shells, again dried, and put up in bundles. From all the districts in which it grows, it is sent to Manila, which is the only port whence it can legally be

exported. It arrives in large bundles, and is packed there by means of a screw-press in compact bales for shipping, secured by rattan, each weighing two piculs. [A picul is about one hundred and forty pounds.]

The best Manila hemp ought to be white, dry, and of a long and fine fiber. This is known at Manila by the name of lupis ; the second quality they call bandala.

That which is brought to the United States is principally manufactured in or near Boston, and is the cordage known as "white rope." The cordage manufactured at Manila is, however, very superior to the rope made with us, although the hemp is of the inferior kind. A large quantity is also manufactured into mats.

In the opinion of our botanist, it is not probable that the plant could be introduced with success into our country, for in the Philippines it is not found north of latitude 14° N.

The coffee-plant is well adapted to these islands. A few plants were introduced into the gardens of Manila about fifty years ago, since which time it has been spread all over the island, as is supposed, by the civet-cats, which, after swallowing the seeds, carry them to a distance before they are voided.

The coffee of commerce is obtained here from the wild plant, and is of an excellent quality. Upward of three thousand five hundred piculs are now exported, of which one-sixth goes to the United States.

The sugar-cane thrives well here. It is planted after the French fashion, by sticking the piece diagonally into the ground. Some, finding the cane has suffered in times of drought, have adopted other modes. It comes to perfection in a year, and they seldom have two crops from the same piece of land, unless the season is very favorable.

There are many kinds of cane cultivated, but that grown in the valley of Pampanga is thought to be the best. It is a small, red variety, from four to five feet high, and not thicker than the thumb. The manufacture of the sugar is rudely conducted ; and the whole business, I was told, was

in the hands of a few capitalists, who, by making advances, secure the whole crop from those who are employed to bring it to market. It is generally brought in molds of the usual conical shape, called pilones, which are delivered to the purchaser from November to June, and contain each about one hundred and fifty pounds. On their receipt they are placed in large store-houses, where the familiar operation of claying is performed. The estimate for the quantity of sugar from these pilones after this process is about one hundred pounds ; it depends upon the care taken in the process.

Of cotton they raise a considerable quantity, and principally of the yellow nankeen. In the province of Ylocos it is cultivated most extensively. The mode of cleaning it of its seed is very rude, by means of a hand-mill, and the expense of cleaning a picul (one hundred and forty pounds) is from five to seven dollars. There have, as far as I have understood, been no endeavors to introduce any cotton-gins from our country.

It will be merely necessary to give the prices at which laborers are paid to show how the compensation is in comparison with that in our country. In the vicinity of Manila, twelve and a half cents per day is the usual wages ; this in the provinces falls to six and nine cents. A man with two buffaloes is paid about thirty cents. The amount of labor performed by the latter in a day would be the plowing of a soane, about two-tenths of an acre. The most profitable way of employing laborers is by the task, when, it is said, the natives work well, and are industrious.

The manner in which the sugar and other produce is brought to market at Manila is peculiar, and deserves to be mentioned. In some of the villages the chief men unite to build a vessel, generally a pirogue, in which they embark their produce, under the conduct of a few persons, who go to navigate it and dispose of the cargo. In due time they make their voyage, and when the accounts are settled, the returns are distributed to each according to his share. Festivities are then held, the saints thanked for their kindness,

and blessings invoked for another year. After this is over, the vessel is taken carefully to pieces, and distributed among the owners, to be preserved for the next season.

The profits in the crops, according to estimates, vary from sixty to one hundred per cent.; but it was thought, as a general average, that this was, notwithstanding the great productiveness of the soil, far beyond the usual profits accruing from agricultural operations. In some provinces this estimate would hold good, and probably be exceeded.

Indigo would probably be a lucrative crop, for that raised here is said to be of a quality equal to the best, and the crop is not subject to so many uncertainties as in India; the capital and attention required in vats, etc., prevent it from being raised in any quantities. Among the productions, the bamboo and rattan ought to claim a particular notice from their great utility; they enter into almost everything. Of the former their houses are built, including frames, floors, sides and roof; fences are made of the same material, as well as every article of general household use, including baskets for oil and water. The rattan is a general substitute for ropes of all descriptions, and the two combined are used in constructing rafts for crossing ferries.

The crops frequently suffer from the ravages of the locusts, which sweep all before them. Fortunately for the poorer classes, their attacks take place after the rice has been harvested; but the cane is sometimes entirely cut off. The authorities of Manila, in the vain hope of stopping their devastations, employ persons to gather them and throw them into the sea. I understood on one occasion they had spent $80,000 in this way, but all to little purpose. It is said that the crops rarely suffer from droughts, but on the contrary the rains are thought to fall too often and to flood the rice fields; these, however, yield a novel crop, and are very advantageous to the poor, viz.: a great quantity of fish, which are called dalag, and are a species of Blunnius; they are so plentiful that they are caught with baskets; these fish weigh from a half to two pounds, and some are said to be eighteen inches long; but this is not all; they

are said, after a deep inundation, to be found even in the vaults of churches.

The Philippines are divided into thirty-one provinces, sixteen of which are on the island of Luzon, and the remainder comprise the other islands of the group and the Ladrones.

The population of the whole group is above three millions, including all tribes of natives, mestizoes, and whites. The latter-named class are but few in number, not exceeding 3000. The mestizoes were supposed to be about 15,000 or 20,000 ; they are distinguished as Spanish and Indian mestizoes. The Chinese have of late years increased to a large number, and it is said that there are 40,000 of them in and around Manila alone. One-half of the whole population belongs to Luzon. The island next to it in number of inhabitants is Panay, which contains about 330,000. Then come Zebu, Mindanao, Leyte, Samar, and Negros, varying from the above numbers down to 50,000. The population is increasing, and it is thought that it doubles itself in seventy years. This rate of increase appears probable, from a comparison of the present population with the estimate made at the beginning of the present century, which shows a growth in forty years of about 1,400,000.

The native population is composed of a number of distinct tribes, the principal of which in Luzon are Pangarihan, Ylocos, Cagayan, Tagala, and Pampangan.

The Irogotes, who dwell in the mountains, are the only natives who have not been subjected by the Spaniards. The other tribes have become identified with their rulers in religion, and it is thought that by this circumstance alone has Spain been able to maintain the ascendency, with so small a number, over such a numerous, intelligent, and energetic race as they are represented to be. This is, however, more easily accounted for, from the Spaniards fostering and keeping alive the jealousy and hatred that existed at the time of the discovery between the different tribes.

It seems almost incredible that Spain should have so long persisted in the policy of allowing no more than one

galleon to pass annually between her colonies, and equally so that the nations of Europe should have been so long deceived in regard to the riches and wealth that Spain was monopolizing in the Philippines. The capture of Manila, in 1762, by the English, first gave a clear idea of the value of this remote and little-known appendage of the empire.

The Philippines, considered in their capacity for commerce, are certainly among the most favored portions of the globe, and there is but one circumstance that tends in the least degree to lessen their apparent advantage ; this is the prevalence of typhoons in the China seas, which are occasionally felt with force to the north of latitude 10° N. South of that parallel they have never been known to prevail, and seldom so far ; but from their unfailing occurrence yearly in some part of the China seas, they are looked for with more or less dread, and cause each season a temporary interruption in all the trade that passes along the coast of these islands.

The army is now composed entirely of native troops, who number about 6000 men, and the regiments are never suffered to serve in the provinces in which they are recruited, but those from the North are sent to the South, and *vice versa*. There they are employed to keep a continual watch on each other ; and, speaking different dialects, they never become identified.

They are, indeed, never allowed to remain long enough in one region to imbibe any feelings in unison with those of its inhabitants. The hostility is so great among the regiments that mutinies have occurred, and contests arisen which have produced even bloodshed, which it was entirely out of the power of the officers to prevent. In cases of this kind, summary punishment is resorted to.

Although the Spaniards, as far as is known abroad, live in peace and quiet, this is far from being the case ; for rebellion and revolts among the troops and tribes are not infrequent in the provinces. During the time of our visit one of these took place, but it was impossible to learn anything concerning it that could be relied upon, for all con-

versation respecting such occurrences is interdicted by the government. The difficulty to which I refer was said to have originated from the preaching of a fanatic priest, who inflamed them to such a degree that they overthrew the troops and became temporarily masters of the country. Prompt measures were immediately taken, and orders issued to give the rebels no quarter ; the regiments most hostile to those in the revolt were ordered to the spot ; they spared no one ; the priest and his companions were taken, put to death, and, according to report, in a manner so cruel as to be a disgrace to the records of the nineteenth century. Although I should hope the accounts I heard of these transactions were incorrect, yet the detestation these acts were held in would give some color to the statements.

The few gazettes that are published at Manila are entirely under the control of the government ; and a resident of that city must make up his mind to remain in ignorance of the things that are passing around him, or believe just what the authorities will allow to be told, whether truth or falsehood. The government of the Philippines is emphatically an iron rule ; how long it can continue so is doubtful.

The natives of the Philippines are industrious. They manufacture an amount of goods sufficient to supply their own wants, particularly from Panay and Ylocos. These, for the most part, consist of cotton and silks, and a peculiar article called pina. The latter is manufactured from a species of *Bromelia* (pine-apple), and comes principally from the island of Panay. The finest kinds of pina are exceedingly beautiful and surpass any other material in its evenness and beauty of texture. Its color is yellowish, and the embroidery is fully equal to the material. It is much sought after by all strangers, and considered as one of the curiosities of this group. Various reports have been stated of the mode of its manufacture, and among others that it was woven under water, which I found, upon inquiry, to be quite erroneous. The web of the pina is so fine that they are obliged to prevent all currents of air from passing through the rooms where it is manufactured, for which purpose there

are gauze screens in the windows. After the article is brought to Manila, it is then embroidered by girls ; this last operation adds greatly to its value.

The market is a never-failing place of amusement to a foreigner ; for there a crowd of the common people is always to be seen, and their mode of conducting business may be observed. The canals here afford great facilities for bringing vegetables and produce to market in a fresh state. The vegetables are chiefly brought from the shores of the Laguna de Bay, through the river Pasig. The meat appeared inferior, and as in all Spanish places, the art of butchering is not understood. The poultry, however, surpasses that of any other place I have seen, particularly in ducks, the breeding of which is pursued to a great extent. Establishments for breeding these birds are here carried on in a systematic manner, and are a great curiosity. They consist of many small inclosures, each about twenty feet by forty or fifty, made of bamboo, which are placed on the bank of the river, and partly covered with water. In one corner of the inclosure is a small house, where the eggs are hatched by artificial heat, produced by rice-chaff in a state of fermentation. It is not uncommon to see six or eight hundred ducklings all of the same age. There are several hundreds of these inclosures, and the number of ducks of all ages may be computed at millions. The manner in which they are schooled to take exercise, and to go in and out of the water, and to return to their house, almost exceeds belief. The keepers or tenders are of the Tagala tribe, who live near the inclosures, and have them at all times under their eye. The old birds are not suffered to approach the young, and all of one age are kept together. They are fed upon rice and a small species of shell-fish that is found in the river and is peculiar to it. From the extent of these establishments we inferred that ducks were the favorite article of food at Manila, and the consumption of them must be immense. The markets are well supplied with chickens, pigeons, young partridges, which are brought in alive, and turkeys. Among strange articles that we saw for sale were

cakes of coagulated blood. The markets are well stocked with a variety of fish, taken both in the Laguna and bay of Manila, affording a supply of both the fresh and salt water species, and many smaller kinds that are dried and smoked. Vegetables are in great plenty, and consist of pumpkins, lettuce, onions, radishes, very long squashes, etc.; of fruits they have melons, chicos, durians, marbolas, and oranges.

Fish are caught in weirs, by the hook, or in seines. The former are constructed of bamboo stakes, in the shallow water of the lake, at the point where it flows through the river Pasig. In the bay, and at the mouth of the river, the fish are taken in nets, suspended by the four corners from hoops attached to a crane, by which they are lowered into the water. The fishing-boats are little better than rafts, and are called saraboas.

The usual passage-boat is termed banca, and is made of a single trunk. These are very much used by the inhabitants. They have a sort of awning to protect the passenger from the rays of the sun ; and being light are easily rowed about, although they are exceedingly uncomfortable to sit in, from the lowness of the seats, and liable to overset if the weight is not placed near the bottom. The outrigger has in all probability been dispensed with, owing to the impediment it offered to the navigation of their canals; these canals offer great facilities for the transportation of burdens ; the banks of almost all of them are faced with granite. Where the streets cross them, there are substantial stone bridges, which are generally of no more than one arch, so as not to impede the navigation. The barges used for the transportation of produce resemble our canal-boats, and have sliding roofs to protect them from the rain.

Water for the supply of vessels is brought off in large earthen jars. It is obtained from the river, and if care is not taken, the water will be impure ; it ought to be filled beyond the city. Our supply was obtained five or six miles up the river by a lighter, in which were placed a number of water-casks. It proved excellent.

The country around Manila, though no more than an

extended plain for some miles, is one of great interest and beauty, and affords many agreeable rides on the roads to Santa Anna and Maraquino. Most of the country-seats are situated on the river Pasig ; they may indeed be called palaces, from their extent and appearance. They are built upon a grand scale, and after the Italian style, with terraces, supported by strong abutments, decked with vases of plants. The grounds are ornamented with the luxuriant, lofty, and graceful trees of the tropics; these are tolerably well kept. Here and there fine large stone churches, with their towers and steeples, are to be seen, the whole giving the impression of a wealthy nobility and a happy and flourishing peasantry.

MISCELLANEOUS

Exploration of Teneriffe

By A. VON HUMBOLDT

AN expedition to the summit of the volcano of Teneriffe is interesting, not solely on account of the great number of phenomena which are the objects of scientific research; it has still greater attractions from the picturesque beauties which it lays open to those who are feelingly alive to the majesty of nature. It is a difficult task to describe those sensations, which act with so much the more force as they have something undefined, produced by the immensity of the space as well as by the greatness, the novelty and the multitude of the objects, amidst which we find ourselves transported. When a traveler attempts to furnish descriptions of the loftiest summits of the globe, the cataracts of the great rivers, the tortuous valleys of the Andes, he is exposed to the danger of fatiguing his readers, by the monotonous expression of his admiration. It appears to me more conformable to the plan which I have proposed to myself in this narrative, to indicate the peculiar character that distinguishes each zone ; we exhibit with more clearness the physiognomy of the landscape in proportion as we endeavor to sketch its individual features, to compare them with each other, and discover by this kind of analysis the sources of those enjoyments which are offered to us by the great picture of nature.

Travelers have learned by experience that views from the summits of very lofty mountains are neither so beautiful,

picturesque, nor varied, as those from heights which do not exceed that of Vesuvius, Rigi and Puy-de-Dôme. Colossal mountains, such as Chimborazo, Antisana, or Mount Rose, compose so large a mass, that the plains covered with rich vegetation are seen only in the immensity of distance, where a blue and vapory tint is uniformly spread over the landscape. The Peak of Teneriffe, from its slender form and local position, unites the advantages of less lofty summits, to those which arise from very great heights. We not only discover from its top a vast expanse of sea, but we see also the forests of Teneriffe, and the inhabited parts of the coasts, in a proximity fitted to produce the most beautiful contrasts of form and color. We might say that the volcano crushes with its mass the little isle which serves as its basis, and shoots up from the bosom of the waters to a height three times loftier than the region where the clouds float in summer. If its crater, half extinguished for ages past, shot forth flakes of fire like that of Stromboli in the Æolian islands, the Peak of Teneriffe, resembling a light-house, would furnish a direction to the mariner in a circuit of more than two hundred and sixty leagues.

When seated on the external edge of the crater, we turned our eyes toward the north-west, where the coasts are decked with villages and hamlets. At our feet masses of vapor, constantly driven by the winds, afforded us the most variable spectacle. A uniform stratum of clouds, the same as we have just described, and which separated us from the lower regions of the island, had been pierced in several places by the effect of the small currents of air, which the earth, heated by the sun, began to send toward us. The port of Orotava, its vessels at anchor, the gardens and the vineyards which encircle the town, exhibited themselves through an opening which seemed to enlarge every instant. From the summit of these solitary regions our eyes hovered over an inhabited world; we enjoyed the striking contrast between the bare sides of the Peak, its steep declivities covered with scoriæ, its elevated plains destitute of vegetation, and the smiling aspect of the cultured country

beneath; we beheld the plants divided by zones, as the temperature of the atmosphere diminished with the height of the site. Below the Piton, lichens begin to cover the scorious lava with lustered surface ; a violet, akin to the viola decumbens, rises on the slope of the volcano at a height of 11,310 feet; it takes the lead not only of the other herbaceous plants, but even of the graminea, which, in the Alps and on the ridge of the Cordilleras, form close neighborhood with the plants of the family of cryptogamia. Tufts of retama, loaded with flowers, make gay the valleys hollowed out by the torrents, and which are encumbered by the effects of the lateral eruptions ; below the spartium, or retama, lies the region of ferns, bordered by the tract of the arborescent heaths. Forests of laurel, rhamnus, and arbutus, divide the ericas from the rising grounds planted with vines and fruit trees. A rich carpet of verdure extends from the plains of spartium, and the zone of the alpine plants even to the group of the date trees and the musa, at the feet of which the ocean appears to roll. I here pass slightly over the different features of this botanical chart, as I shall enter hereafter into some further details respecting the geography of the plants of the Isle of Teneriffe.

The seeming proximity, in which, from the summit of the Peak, we behold the hamlets, the vineyards, the gardens on the coast, is increased by the prodigious transparency of the atmosphere. Notwithstanding the great distance, we distinguished not only the houses, the sails of the vessels, and the trunks of trees, our eyes dwelt on the rich vegetation of the plains, enameled with the most vivid coloring. These phenomena are owing not only to the height of the site, but to the peculiar modifications of the air in warm climates. Under every zone, an object placed on a level with the sea, and viewed in a horizontal direction, appears less luminous than when seen from the top of a mountain, when vapors arrive across strata of air of decreasing density. Differences equally striking are produced by the influence of climates ; the surface of a lake or large river is less resplendent when we see it at an equal distance, from

the top of the higher Alps of Switzerland than when we view it from the summit of the Cordilleras of Peru and Mexico. In proportion as the air is pure and serene, the solution of the vapors becomes more perfect, and the light loses less in its passage. When from the coast of the South Sea we reach the elevated plains of Quito, or that of Antisana, we are struck for some days at the nearness at which we think we see objects which are seven or eight leagues distant. The Peak of Teyde has not the advantage of being situated in the equinoctial region ; but the dryness of the columns of air which rise perpetually above the neighboring plains of Africa, and which the eastern winds bring with rapidity, gives the atmosphere of the Canary Islands a transparency which surpasses not only that of the air of Naples and Sicily, but perhaps also the purity of the sky of Quito and Peru. This transparency may be regarded as one of the chief causes of the beauty of the landscape under the torrid zone; it is this which brightens the splendor of the vegetable coloring and contributes to the magical effect of their harmonies and their contrasts. If a mass of light, which circulates about objects, fatigues the external senses during a part of the day, the inhabitant of the southern climates has his compensation in moral enjoyments. A lucid clearness in the conceptions, a serenity of mind, correspond with the transparency of the surrounding atmosphere. We feel these impressions without overstepping the limits of Europe. I appeal to travelers who have visited countries rendered famous by prodigies of the imagination and the arts, the favored climates of Greece and Italy.

We prolonged in vain our stay on the summit of the Peak, to wait the moment when we might enjoy the view of the whole of the Archipelago of the Fortunate Islands. We discovered Palma, Gomera, and the Great Canary, at our feet. The mountains of Lanzerota, free from vapors at sunrise, were soon enveloped in thick clouds. On a supposition only of an ordinary refraction, the eye takes in, in calm weather, from the summit of the volcano, a surface of the globe of 5700 square leagues, equal to a fourth of the sur-

face of Spain. The question has often been agitated, if it were possible to perceive the coast of Africa from the top of this colossal pyramid ; but the nearest parts of this coast are still farther from Teneriffe than 2° 49′, or fifty-six leagues.

MISCELLANEOUS

The Island of Trinidad

By JAMES ANTHONY FROUDE

TRINIDAD is the largest, after Jamaica, of the British West Indian Islands, and the hottest absolutely after none of them. It is square-shaped, and, I suppose, was once a part of South America. The Orinoco River and the ocean-currents between them have cut a channel between it and the mainland, which has expanded into a vast shallow lake known as the Gulf of Paria. The two entrances by which the gulf is approached are narrow, and are called *bocas*, or mouths—one the Dragon's Mouth, the other the Serpent's. When the Orinoco is in flood the water is brackish, and the brilliant violet hue of the Caribbean Sea is changed to a dirty yellow; but the harbor which is so formed would hold all the commercial navies of the world, and seems formed by nature to be the depot one day of an enormous trade.

The town has between thirty and forty thousand people living in it, and the rain and the Johnny crows, a black vulture that acts as scavenger between them, keep off pestilence. Outside is a large savanna or park, where the villas are of the successful men of business. One of these belonged to my host, a cool, airy habitation, with open doors and windows, overhanging portico, and rooms into which all the winds might enter, but not the sun. A garden in front was shut off from the savanna by a fence of bananas. At the gate stood as sentinel a cabbage-palm a hundred

feet high; on the lawn mangoes, oranges, papaws, and bread-fruit-trees, strange to look at, but luxuriantly shady. Before the door was a tree of good dimensions, whose name I have forgotten, the stem and branches of which were hung with orchids which G—— had collected in the woods.

The borders were blazing with varieties of the single hibiscus, crimson, pink, and fawn-color, the largest that I had even seen. The average diameter of each single flower was from seven to eight inches. Wind streamed freely through the long sitting-room, loaded with the perfume of orange-trees; on table and in bookcase were visible evidences of a highly cultivated taste. The particular room assigned to myself would have been delightful, but that my possession of it was disputed, even in daylight, by mosquitoes, who for bloodthirsty ferocity had a bad preëminence over the worst that I had ever met with elsewhere. I killed one who was at work upon me, and examined him through a glass. Bewick, with the inspiration of genius, had drawn his exact likeness as the devil—a long black stroke for a body, a nick for a neck, horns on the head, and a beak for a mouth, spindle arms, and longer spindle legs, two pointed wings, and a tail. Line for line, there the figure was before me, which in the unforgetable tail-piece is driving the thief under the gallows, and I had a melancholy satisfaction in identifying him. I had been warned to be on the lookout for scorpions, centipedes, jiggers, and land-crabs, who would bite me if I walked slipperless over the floor in the dark. Of these I met with none, either there or anywhere, but the mosquito of Trinidad is enough by himself. For malice, mockery, and venom of tooth and trumpet he is without a match in the world.

From mosquitoes, however, one could seek safety in tobacco-smoke, or hide behind the lace curtains with which every bed is provided. Otherwise I found every provision to make life pass deliciously. To walk is difficult in a damp, steamy atmosphere, hotter during daylight than the hottest forcing-house in Kew. . . . Beautiful, however, it was beyond dispute. Before sunset a carriage took

us around the savanna. Tropical human beings, like tropical birds, are fond of fine colors, especially black human beings, and the park was as brilliant as Kensington Gardens on a Sunday. At nightfall the scene became even more wonderful, air, grass, and trees being alight with fire-flies, each as brilliant as an English glow-worm. The palm-tree at our own gate stood like a ghostly sentinel clear against the starry sky, a single long dead frond hanging from below the coronet of leaves and clashing against the stem as it was blown to and fro by the night wind, while long-winged bats swept and whistled over our heads.

The "Residence" stands in a fine situation, in large grounds of its own, at the foot of the mountains. It has been lately built, regardless of expense, for the colony is rich, and likes to do things handsomely. On the lawn, under the windows, stood a tree which was entirely new to me, an enormous ceiba or silk-cotton-tree, umbrella-shaped, fifty yards in diameter, the huge and buttressed trunk throwing out branches so massive that one wondered how any woody fiber could bear the strain of their weight, the boughs twisting in and out till they made a roof over one's head, which was hung with every fantastic variety of parasites.

Vast as the ceibas were which I saw afterward in other parts of the West Indies, this was the largest. The ceiba is the sacred tree of the negro, the temple of Jumbi, the proper house of Obeah. To cut down one is impious. No black in his right mind would wound even the bark. A Jamaica police officer told me that if a ceiba had to be removed the men who used the ax were well dosed with rum to give them courage to defy the devil.

From Government House we strolled into the adjoining Botanical Gardens. I had long heard of the wonders of these. The reality went beyond description. Plants with which I was familiar as *shrubs* in English conservatories were here expanded into forest giants, with hundreds of others of which we cannot raise even Liliputian imitations. Let man be what he will, nature in the tropics is always grand. Palms were growing in the greatest luxuriance, of

every known species, from the cabbage towering up into the sky to the fan-palm of the desert whose fronds are reservoirs of water.

Of exogenous trees the majority were leguminous in some shape or other, forming flowers like a pea or vetch and hanging their seeds in pods ; yet in shape and foliage they distanced far the most splendid ornaments of an English park. They had Old-World names and characters wholly different ; cedars which were not conifers, almonds which were no relations of peaches, and gum-trees as unlike eucalypti as one tree can be unlike another.

Again, you saw ferns which you seemed to recognize till some unexpected anomaly startled you out of your mistake. A gigantic Portugal laurel, or what I took for such, was throwing out a flower direct from the stem like a cactus. Grandest among them all, and happily in full bloom, was the sacred tree of Burmah, the *Amherstia nobilis*, at a distance like a splendid horse-chestnut, with crimson blossoms in pendant bunches, each separate flower in the convolution of its parts exactly counterfeiting a large orchid, with which it had not the faintest affinity, the Amherstia being leguminous like the rest.

Underneath, and dispersed among the imperial beauties, were spice-trees, orange-trees, coffee plants, and cocoa, or again, shrubs with special virtues or vices. We had to be careful what we were about, for fruits of fairest appearance were tempting us all round. My companion was preparing to eat something to encourage me to do the same. A gardener stopped him in time. It was nux vomica. I was straying along a less frequented path, conscious of a heavy vaporous odor, in which I might have fainted had I remained exposed to it. I was close to a manchineel-tree.

Prettiest and freshest were the nutmegs, which had a glen all to themselves and perfumed the surrounding air. In Trinidad and in Grenada I believe the nutmegs are the largest that are known, being from thirty to forty feet high; leaves brilliant green, something like the leaves of an orange, but extremely delicate and thin, folded one over the other,

the lowest branches sweeping to the ground till the whole tree forms a natural bower, which is proof against a tropical shower. The fragrance attracts moths and flies; not mosquitoes, who prefer a ranker atmosphere. I saw a pair of butterflies the match of which I do not remember even in any museum, dark blue shot with green like a peacock's neck, and the size of English bats. I asked a black boy to catch me one. "That sort no let catchee, massa," he said; and I was penitently glad to hear it.

Among the wonders of the garden are the vines, as they call them, that is, the creepers of various kinds that climb about the other trees. Standing in an open space there was what once had been a mighty cedar. It was now dead, only the trunk and dead branches remaining, and had been murdered by a fig-vine which had started from the root, twined itself like a python round the stem, strangled out the natural life, and spreading out in all directions, had covered boughs and twigs with a foliage not its own. So far the vine had done no worse than ivy does at home, but there was one feature about it which puzzled me altogether. The lowest of the original branches of the cedar were about twenty feet above our heads. From these in four or five places the parasite had let fall shoots, perhaps an inch in diameter, which descended to within a foot of the ground and then suddenly, without touching that or anything, formed a bight like a rope, went straight up again, caught hold of the branch from which they started, and so hung suspended exactly as an ordinary swing.

In three distinctly perfect instances the vine had executed this singular evolution, while at the extremity of one of the longest and tallest branches high up in the air it had made a clean leap of fifteen feet without visible help and had caught hold of another tree adjoining on the same level. These performances were so inexplicable that I conceived that they must have been a freak of the gardener's. I was mistaken. He said that at particular times in the year the fig-vine threw out fine tendrils which hung downward like strings. The strongest among them would lay hold of two

or three others and climb up upon them, the rest would die and drop off, while the successful one, having found support for itself above, would remain swinging in the air and thicken and prosper. The leap he explained by the wind. I retained a suspicion that the wind had been assisted by some aspiring energy in the plant itself, so bold it was and so ambitious.

But the wonders of the garden were thrown into the shade by the cottage at the extreme angle of it, where Charles Kingsley had been the guest of Sir Arthur Gordon. It is a long straggling wooden building with deep verandas lying in a hollow overshadowed by trees, with views opening out into the savanna through arches formed by clumps of tall bamboos, the canes growing thick in circular masses and shooting up a hundred feet into the air, where they meet and form frames for the landscape, peculiar and even picturesque when there are not too many of them. These bamboos were Kingsley's special delight, as he had never seen the like of them elsewhere. The room in which he wrote is still shown, and the gallery where he walked up and down with his long pipe. His memory is cherished in the island as of some singular and beautiful presence which still hovers about the scenes which so delighted him in the closing evening of his own life.

In Trinidad there are 18,000 freeholders, most of them negroes and representatives of the old slaves. Their cabins are spread along the road on either side, overhung with bread-fruit-trees, tamarinds, calabash-trees, out of which they make their cups and water-jugs; the luscious granadilla climbs among the branches; plantains throw their cool shade over the doors; oranges and limes and citrons perfume the air, and droop their boughs under the weight of their golden burdens. There were yams in the gardens and cows in the paddocks, and cocoa-bushes loaded with purple or yellow pods. Children played about in swarms in happy idleness and abundance, with schools, too, at intervals, and an occasional Catholic chapel, for the old religion prevails in Trinidad, never having been disturbed.

What form could human life assume more charming than that which we were now looking on ? Once more, the earth does not contain any peasantry so well off, so well cared for, so happy, so sleek and contented as the sons and daughters of the emancipated slaves in the English West Indian Islands. Sugar may fail the planter, but cocoa, which each peasant can grow with small effort for himself, does not fail and will not. He may "better his condition," if he has any such ambition, without stirring beyond his own ground, and so far, perhaps, his ambition may extend, if it is not turned off upon politics.

Even the necessary evils of the tropics are not many or serious. His skin is proof against mosquitoes. There are snakes in Trinidad as there were snakes in Eden. "Plenty snakes," said one of them who was at work in his garden, "plenty snakes, but no bitee." As to costume, he would prefer the costume of innocence if he were allowed. Clothes in such a climate are superfluous for warmth, and to the minds of the negroes, unconscious as they are of shame, superfluous for decency. European prejudice, however, still passes for something; the women have a love for finery, which would prevent a complete return to African simplicity; and in the islands which are still French, and in those like Trinidad, which the French originally colonized, they dress themselves with real taste. They hide their wool in red or yellow handkerchiefs, gracefully twisted ; or perhaps it is not only to conceal the wool. Columbus found the Carib women of the island dressing their hair in the same fashion.

The water-works, when we reached them, were even more beautiful than we had been taught to expect. A dam has been driven across a perfectly limpid mountain stream; a wide open area has been cleared, leveled, strengthened with masonry, and divided into deep basins or reservoirs, through which the current continually flows. Hedges of hibiscus shine with crimson blossoms. Innumerable humming-birds glance to and fro among the trees and shrubs, and gardens and ponds are overhung by magnificent bamboos, which so astonished me by their size that I inquired

if their height had been measured. One of them, I was told, had lately fallen, and was found to be one hundred and thirty feet long. A single drawback only there was to this enchanting spot, and it was again the snakes. There are huge pythons in Trinidad which are supposed to have crossed the straits from the continent. Some washerwomen at work in the stream had been disturbed a few days before our visit by one of these monsters, who had come down to see what they were about. They are harmless, but trying to the nerves.

The train from Porus brought us back to Kingston an hour before sunset. The evening was lovely, even for Jamaica. The sea-breeze had fallen, the land-breeze had not risen, and the dust lay harmless on road and hedge. Cherry Garden, to which I was bound, was but seven miles distant by the direct road, so I calculated on a delightful drive which would bring me to my destination before dark.

So I calculated ; but alas! for human expectation. I engaged a "buggy" at the station, with a decent-looking conductor, who assured me that he knew the way to Cherry Garden as well as to his own door. His horse looked starved and miserable. He insisted that there was not another in Kingston that was more than a match for it. We set out, and for the first two or three miles we went on well enough, conversing amicably on things in general. But it so happened that it was market day. The road was thronged with women plodding along with their baskets on their heads, a single male on a donkey to each detachment of them, carrying nothing, like an officer with a detachment of soldiers.

Foolish indignation rose in me, and I asked my friend if he was not ashamed of seeing the poor creatures toiling so cruelly, while their lords and masters amused themselves. I appealed to his feelings as a man, as if it were likely that he had any. The wretch only laughed. "Ah, massa," he said, with his tongue in his cheek, "women do women's work, men do men's work—all right." "And what is men's work?" I asked. Instead of answering he went on,

"Look at they women, massa—how they laugh, how happy they be! Nobody more happy than black woman, massa."

I would not let him off. I pricked into him, till he got excited too, and we argued and contradicted each other, till at last the horse, finding he was not attended to, went his own way and that was a wrong one. Between Kingston and our destination there is a deep, sandy flat, overgrown with brush and penetrated in all directions with labyrinthine lanes. Into this we had wandered in our quarrels, and neither of us knew where we were. The sand was loose; our miserable beast was above his fetlocks in it, and was visibly drooping under his efforts to drag us along even at a walk.

The sun went down. The tropic twilight is short. The evening star shone out in the west, and the crescent moon over our heads. My man said this and said that; every word was a lie, for he had lost his way and would not allow it. We saw a light through some trees. I sent him to inquire. We were directed one way and another way, every way except the right one. We emerged at last upon a hard road of some kind. The stars told me the general direction. We came to cottages where the name of Cherry Garden was known, and we were told that it was two miles off; but alas! again there were two roads to it—a short and good one and a long and bad one, and they sent us by the last. There was a steep hill to climb, for the house is eight hundred feet above the sea. The horse could hardly crawl, and my "nigger" went to work to flog him to let off his own ill-humor. I had to stop that by force, and at last, as it grew too dark to see the road under the trees, I got out and walked, leaving him to follow at a foot's pace. The night was lovely. I began to think that we should have to camp out after all, and that it would be no great hardship.

It was like the gloaming of a June night in England, the daylight in the open spots not entirely gone, and mixing softly with the light of moon and planet and the flashing of the fire-flies. I plodded on, mile after mile, and Cherry

Garden still receded to one mile farther. We came to a gate of some consequence. The outline of a large mansion was visible, with gardens round it. I concluded that we had arrived, and was feeling for the latch when the forms of a lady and gentleman appeared against the sky who were strolling in the grounds. They directed me still upward, with the mile which never diminished still to be traveled.

Like myself, our weary animal had gathered hopes from the sight of the gate. He had again to drag on as he could. His owner was subdued and silent, and obeyed whatever order I gave him. The trees now closed over us so thick that I could see nothing. Vainly I repented of my unnecessary philanthropy, which had been the cause of the mischief; what had I to do with black women, or white either, for that matter? I had to feel the way with my feet and a stick. I came to a place where the lane again divided. I tried the nearest turn. I found a trench across it three feet deep, which had been cut by a torrent. This was altogether beyond the capacity of our unfortunate animal, so I took the other boldly, prepared, if it proved wrong, to bivouac till morning with my "nigger," and go on with my argument.

Happily there was no need; we came again on a gate which led into a field. There was a drive across it and wire fences. Finally lights began to glimmer and dogs to bark; we were at the real Cherry Garden at last, and found the whole household alarmed for what had become of us.

I could not punish my misleader by stinting his fare, for I knew that I had only myself to blame. He was an honest fellow after all. In the disturbance of my mind I left a rather valuable umbrella in his buggy. He discovered it after he had gone, and had grace enough to see that it was returned to me.

MISCELLANEOUS

The Australian Desert

By PETER EGERTON WARBURTON

WE are to commence our flight to the Oakover at sunset. God grant us strength to get through ! Richard is very weak and so am I. To get rid of a small box, we selected a few bottles of homeopathic medicines for use and ate up all the rest. How much of our property we had thrown away before we resorted to this expedient of lightening the loads may be guessed. I started later than we intended, our course about west by south. The sand-hills are more troublesome than we have had them for some time. When we wanted to look north and south for water, the sand-hills generally ran east and west ; now, when we particularly wish to avoid crossing them, we are compelled to do so from their running north-west by west. The eclipse of the moon darkened our journey for several hours, but we made a favorable stretch westward for the last few miles of our night's journey. I could not go so far as I had hoped, from the fatiguing character of the country. Camped at three-fifteen A.M.

November 5, 1873.—A strong east wind is blowing. We are compelled to give up smoking while on a short allowance of water. It is a deprivation, for smoke and water stand in the place of food. We started west-south-west at six-thirty P.M., and made twenty-five miles, though we had most trying sand-hills to cross. I became quite unable to continue the journey, being reduced to a skeleton by thirst,

famine, and fatigue. I was so emaciated and weak I could scarcely rise from the ground, or stagger half a dozen steps when up. Charley, a native member of the party, had been absent all day, and we were alarmed about him when he did not return at sunset. I knew not what to do. Delay was death to us all, as we had not water enough to carry us through ; on the other hand, to leave the camp without the lad seemed an inhuman act, as he must then perish. It was six against one, so I waited till the moon was well up, and started at nine P.M.

We made about eight miles, and while crossing a flat heard, to our intense delight, a "cooee," and Charley joined us. Poor lad, how rejoiced we were to see him again so unexpectedly! The lad had actually walked about twenty miles after all the fatigue of the previous night's traveling; he had run up a large party of natives, and gone to their water. This news of more water permitted us to use at once what we had with us, and the recovery of Charley put us in good spirits. It may, I think, be admitted that the hand of Providence was distinctly visible in this instance.

I had deferred starting until nine P.M., to give the absent boy a chance of regaining the camp. It turned out afterward that had we expedited our departure by ten minutes, or postponed it for the same length of time, Charley would have missed us; and had this happened, there is little doubt that not only myself, but probably other members of the expedition, would have perished from thirst. The route pursued by us was at right angles with the course taken by the boy, and the chances of our stumbling up against each other in the dark were infinitesimally small. Providence mercifully directed it otherwise, and our departure was so timed that, after traveling from two to two hours and a half, when all hope of the recovery of the wanderer was almost abandoned, I was gladdened by the "cooee" of the brave lad, whose keen ears had caught the sound of the bells attached to the camels' necks.

To the energy and courage of this untutored native may, under the guidance of the Almighty, be attributed the sal-

vation of the party. It was by no accident that he encountered the friendly well. For fourteen miles he followed up the tracks of some blacks, though fatigued by a day of severe work, and, receiving a kindly welcome from the natives, he had hurried back, unmindful of his own exhausted condition, to apprise his companions of the important discovery he had made. We turned toward the native camp and halted a short distance from it, that we might not frighten them away. I was so utterly exhausted when we camped at three A.M. that it was evident I never could have gone on after that night without more food and water. I would therefore thankfully acknowledge the goodness and mercy of God in saving my life by guiding us to a place where we got both.

November 7. — Reached the well at six A.M. The natives fled at our approach, but returned after a little time. Wallaby were procured from them by barter. The fresh meat and plenty of water restored me for a time from my forlorn condition. There are so many natives that they drink more of their own water than we can well spare them. We obtained here the rest we all so much needed.

November 8. — The natives all disappeared at daylight, and our hope of more food goes with them. I have invariably throughout the journey carried my pistol in my belt, but for the last few days its weight was too much for me, and I had put it in my bag. While lying under the shade of a blanket, with my head on the bag, one barrel unaccountably went off, and, had not the muzzle been turned from me, I should have had the ball through my head. My life has again been given to me. Our position now is lat. 20° 41′, long. (by account) 122° 30′; so I hope we are not more than three days' journey from the Oakover, and we expect to find some tributary before reaching the river itself. We trust a better country may supply us with some means of getting food. The natives at this camp have a large sea-shell for a drinking-cup; they have also an old butcher's knife, and seem to be acquainted with cattle. I think they have seen white men before. That they possessed a knowledge of cattle was inferred from the signs they made,

and from a tolerably good imitation of lowing when they saw the camels. All these things cheer us with the hope of our reaching a country in which we may find something to eat.

The terrible sand-hills we have crossed have impeded our progress, and the country yields us nothing whatever ; I cannot get even a crow or a snake. The sun-dried camel meat affords us only a nominal subsistence ; there is not a particle of nourishment in it. We are not particular, and whatever we could get we should eat. One of the camels is reported to be ailing. These animals, though most enduring when well, appear liable to many sudden and unaccountable maladies. We started toward the west at seven P.M. Crossed some sand ridges ; but the flats, though more extensive, are very bad for traveling over, being thickly covered with immense tussocks of spinifex. This and the ailing camel lessened our progress. Passed one small dry clay-pan and several ant-hills, which looks as if we were gradually clearing those frightful sand-hills that have worn us out and cost us so many camels. Camped at three-thirty A.M. . . .

We killed our last meat on the twentieth of October; a large bull camel has therefore fed us for three weeks. It must be remembered that we have no flour, tea, nor sugar; neither have we an atom of salt, so we cannot salt our meat. We are seven in all, and are living entirely upon sun-dried slips of meat, which are as tasteless and innutritious as a piece of dead bark. Unless the game drops into our hands in great abundance, we must kill another camel directly we get to water. Most of us are nearly exhausted from starvation, and our only resource is a camel, which would disappear from before us in a twinkling.

Started at six-fifteen P.M. Traveled five hours ; then took a latitude, which put us in 21° 2′; so we turned west for three hours more, completing twenty miles over very hard country and heavy sand-hills.

November 12. — We find no appearance of change in the country, and suppose that we are more to the eastward

than we supposed, or else the head of the Oakover is laid down more to the eastward than it is. The error is most probably mine, as it is difficult to keep the longitude quite correct after traveling so many months on a general westerly course. Our position is most critical, in consequence of the weakness of the camels. They cannot get over this terrible country and stand the fierce heat without frequent watering and rest. Without water we are helpless.

Three P.M. I have decided to send Lewis, the two camel men, and the black boy on ahead with the best and strongest camels, to try to reach the river, returning to us with water if successful. My son and Dennis White and myself remain behind, but following the first party as fast as our jaded camels can take us. We have abandoned everything but our small supply of water and meat, and each party has a gun.

Lewis and his party started at six P.M. We left ourselves at six-thirty. We could make only about four miles, when we lay down till two A.M. Starting again, we had made about eight miles when we were surprised by a voice, and found we had overtaken the advance party, one of whose camels had knocked up on the previous night. This was a death-blow to our hopes of getting relief by sending them on first. We are hemmed in on every side ; every trial we make fails, and I can now only hope that some one or more of the party may reach water sooner or later. As for myself, I can see no hope of life, for I cannot hold up without food and water. I have given Lewis written instructions to justify his leaving me should I die, and have made such arrangement as I can for the preservation of my journals and maps. The advance party has started again, and we followed till a little after sunrise, when our camels showed signs of distress, and we camped. Should the advance party see likely smokes, they are to turn to them.

My party at least are now in that state that, unless it please God to save us, we cannot live more than twenty-four hours. We are at our last drop of water, and the smallest bit of dried meat chokes me. I fear my son must

share my fate, as he will not leave me. God have mercy upon us, for we are brought very low, and by the time death reaches us we shall not regret exchanging our present misery for that state in which the weary are at rest.

We have tried to do our duty, and have been disappointed in all our expectations. I have been in excellent health during the whole journey, and am so still, being merely worn out from want of food and water. Let no self-reproaches afflict any one respecting me. I undertook the journey for the benefit of my family, and I was quite equal to it under all the circumstances that could be reasonably anticipated; but difficulties and losses have come upon us so thickly for the last few months that we have not been able to move. Thus, our provisions are gone, but this would not have stopped us could we have found water without such laborious search. The country is terrible. I do not believe men ever traversed so vast an extent of continuous desert.

We follow this afternoon on the advance tracks as far as our camels can take us. Richard shot me a little bird. It was only about the size of a sparrow, but it did me good. If the country would only give any single thing we could eat I should do very well, but we cannot find a snake, kite, or crow. There are a few wallabies in the spinifex, but we cannot get them. Our miseries are not a little increased by the ants. We cannot get a moment's rest, night or day, for them.

November 13.—My rear party could advance only eight miles, when the camels gave in. Our food is scanty enough, but our great want is water. We have a little, but dare not take more than a spoonful at a time, while the heat is so great that the slightest exposure and exertion bring on a parching thirst. We are as low and weak as living men well can be, and our only hope of prolonging our lives is in the advance party finding some native camp ; we have seen smokes, but are in too crippled a state to go to them.

November 14.—Early this morning my son took our man White, and started in the direction of the smoke we

had last seen. At mid-day, while I was sipping in solitude a drop of water out of a spoon, Lewis came up with a bag of water. Never shall I forget the draught of water I then got, but I was so weak that I almost fainted shortly after drinking it. The advance party had run up a smoke and found a well about twelve miles off. Our lives were saved, but poor Charley was nearly killed. He had gone forward alone to the native camp, the remainder of the party with the camels keeping out of sight. The blacks treated Charley kindly and gave him water; but when he cooeed for the party to come up, and the camels appeared, then I suppose the men were frightened, and supposed Charley had entrapped them. They instantly speared him in the back and arm, cut his skull with a waddy, and nearly broke his jaw.

I do not think this attack was made with any premeditated malice ; but doubtless they would have killed the lad had not the remainder of the party, rushing to his rescue, frightened them away. Unfortunately, the few medicines we had not eaten had by some oversight been left behind at the camp, where we abandoned almost everything but the clothes we happened to stand up in. Lewis returned to the well, and was to come out and meet us next day with more water. We started at sunset, but could not keep on the tracks for more than two miles, when we camped.

November 15.—We made another effort at daylight to get on, but one of the camels broke down, though it had not carried a saddle. The poor beast had become quite blind, and staggered about in a most alarming way. We could not get her beyond a mile and a half when she knocked up under the shade of a bush, and would go no farther. We therefore also sat down to await the water to be sent out to us. The heat was intense, and my son, having been obliged to walk because the camel could not carry him, suffered very greatly from thirst ; and had not water been brought us before mid-day it would have gone ill with him. Between ten and eleven A.M. Lewis returned with water from the well.

The camel, though we gave it some water, could not move from the shade of the bush. We tried to drive it, and to drag it, but to no purpose, therefore we shot it. My son and White returned to the well for more water, and to bring out camels to carry the meat. Lewis remained with me to cut up the camel and prepare it for carriage. We sent the head and tail, with the liver and half the heart and kidneys, to make soup for Charley, and a little picking for the rest. I hope the fact of the camel's head not having been turned toward Mecca, or its throat cut by a "True Believer," may not prejudice the camel men against the use of what we send.

Cutting up the camel and eating the "tit-bits" was the work of the day. We have now only five camels, and one of them so weak it cannot carry a saddle. Could we but reach the Oakover, we might manage some way or other; but the camels must take us there, or we shall never see it. I am sanguine now that we shall get there with at least four camels; two days ago I expected never to be able to leave the spot I was lying on. . . .

December 25.—We cannot but draw a mental picture of our friends in Adelaide sitting down to their Christmas-dinner, while we lie sweltering on the ground starving, and should be thankful to have the pickings out of any pig's trough. This is no exaggeration, but literal truth. We cut out three bee-holes to-day, but found no honey in any of them. No sign of Lewis. If he is not here by the close of Sunday next, I shall be obliged to suppose he has gone to Roebourne, in which case there can be no hope of his return for the next three weeks, and, except God grant us His help, we cannot live so long on our present supply.

Our lives have been preserved through many and great dangers, so my trust is in God's mercy toward us; it never fails, though it does not take always the course we look for.

We fancied we should find many opossums in the gum-trees, but have not seen one. We have fish close to us, but though we deprive ourselves of the entrails of a bird as bait, they will not take it. We eat everything clean through

from head to tail. Prejudiced cooks may not accept my advice, but I am quite satisfied all birds ought to be cooked whole, extracting what you please afterward. We omitted the latter operation, but this is a matter depending on circumstances.

Our last Christmas at Alice Springs was miserable enough, as we then thought, but the present beats it out and out.

December 26.—Desperately hot, but still dry. Obtained a shag and two white cockatoos. Richard's leg is improving, yet he is exceedingly week; not very much better than I am.

December 27.—Passed in our ordinary heated idleness.

December 28.—Threatening rain, but none fell. How heavily time hangs on our hands! We drink, smoke, and sleep as much as we can, then talk about what we should like to eat.

December 29.—Sahleh's finger is very bad indeed from the scorpion sting. The state of our blood allows no wound to heal of itself, and I have no medicine suitable to his case. If it continues to get worse without any prospect of surgical aid, some one (not I) shall have to chop his finger off with a tomahawk or he will lose his arm and his life.

Lewis not having returned, I am compelled to think either that there is no station on the De Grey, or that he has missed it and gone on to Roebourne, in which case he cannot be back for a fortnight. Our position stands thus: We have abundance of water, a little tobacco, and a few bits of dried camel. Occasionally an iguana or a cockatoo enlivens our fare, and lastly, I hope the late rain will bring up some thistles or pig-weed that we can eat.

Our difficulties are to make our meat last, though, so far from doing us good, we are all afflicted with scurvy, diarrhœa, and affection of the kidneys from the use of it. We cannot catch the fish, we cannot find opossums or snakes, the birds won't sit down by us, and we can't get up to go to them. We thought we should have no difficulty in feeding ourselves on the river, but it turns out that from one

cause or another we can get very little, and we are daily dropping down a peg or two lower.

I am, however, satisfied that sending down to look for the station was our best plan; if it fail, the two who have been sent may save their lives, and we have a chance of saving ours if we can only hold out, whereas had we all remained, we should have eaten the two camels that are gone, and scarcely have progressed twenty miles; after that our case would have been hopeless. I cannot tell how it may turn out, but I do not regret the measure. We must wait patiently, I am sure Lewis will do all that can be done. His endurance, perseverance, and judgment are beyond all praise, and his various services have been most valuable. My great fear is that the summer rains may set in and stop his return, but we must hope for the best.

A few hours after making the above entry in my journal Lewis returned with an ample supply for all our wants and with six horses to carry us down.

I need not say how thankful we were, or how quickly we set to work at the food. The camels with the heavier supplies are to come up to-morrow. We all feel most grateful to Messrs. Grant, Harper, and Anderson for their promptitude and liberality.

My companions are all eating to the extent of their powers; for myself, I was too weak to stand the sudden change of food, and am ill in consequence. . . .

I have now only to close my journal. We have been more than a year on the journey. All distances forward and backward included, our land traveling, as nearly as I can estimate it, has amounted to 4000 miles. We have all got through our trials better than could have been expected. I believe my son and myself are the only two European sufferers. I have lost the sight of one eye, and my son is much shaken in health. Sahleh, the Afghan, left his finger in Roebourne. Beyond this I know of no harm that has been done. We started with seventeen camels and ended with two.

MISCELLANEOUS

Volcanic New Zealand

By JAMES ANTHONY FROUDE

OUR immediate business was to visit the famous Terraces, the eighth wonder of the world. [These were destroyed by an earthquake a few years after Froude's visit in 1885.] . . . The Terraces were twenty-four miles off. We were to drive first through the mountains to a native village which had once been a famous missionary station, called Wairoa. There we were to sleep at an establishment affiliated to the Lake Hotel, and the next day a native boat would take us across Tarawara Lake, a piece of water as large as Rotorua, at the extremity of which the miracle of nature was to be found.

We had brought a letter of introduction from Sir George Grey to the chief of Wairoa—a very great chief, we learned afterward, who declined allegiance to the king. It was to his tribe that the Terraces belonged, and to them we were to be indebted for boat and crew and permission to see the place. The sum exacted varied with the number of the party. There were three of us, and we should have £4 to pay. The tariff is fixed, to limit extortion; the money goes to the villagers, who make a night of it and get drunk after each expedition.

A native guide, a lady, would attend us and show off the wonders. There was a choice of two, whose portraits we had studied in the Auckland photograph shops. Both were middle-aged. Sophia was small and pretty, she had

bright black eyes, with a soft expression, and spoke excellent English. Kate was famous for having once dived after and saved a tourist who had fallen into the water, and had received the Humane Society's medal. We delayed our selection till we had seen these famous rivals.

At night the scene is said to be more beautiful than in the day, the fireflies being so many and so brilliant that the glades seem as if lighted up for a festival of the fairies. It is altogether a preternatural kind of place; on emerging from beneath the trees we found ourselves on the edge of a circular lake or basin of beautifully transparent sapphire-colored water, a mile in diameter, with no stream running into it or out of it, and closed completely round with woods, cliffs, and rocky slopes. No boat or canoe floats on its mysterious surface. It is said to contain no living thing save a dragon, which has been seen on sunny days to crawl upon a bank to warm himself. I was reminded instantly of the mountain lake in the "Arabian Nights" where the fisherman drew his net at the bidding of the genius. Here, if anywhere in the world, was the identical spot where the five fish were taken out—red, blue, yellow, purple, and green—that terrified the king's cook by talking in the frying-pan. The dragon might really be there for anything that I could tell; anything might be there, so weird, so enchanted, was the whole scene.

Following the beach for a quarter of a mile, and listening to the voices of the waves which rippled on the shingle, we turned around a shoulder of rock, and saw, a hundred feet below us, and divided from the blue lake by a ridge over which a strong hand might throw a stone, a second lake of a dingy green color—not enchanted, this one, but merely uncanny looking. I suppose below both these are mineral springs which account for the tint. Out of the green lake a river did run—a strong, rapid stream, falling in cataracts down a broken ravine, and overhung by dense clumps of trees with large glossy leaves. The road followed the water into a valley, which opened out at the lower end. There stood Wairoa and its inhabitants.

The fall itself was worth a visit, being finer perhaps than the finest in Wales or Cumberland. We had to crawl down a steep slippery path through overhanging bushes to look at it from the bottom. The water fell about two hundred feet, at two leaps, broken in the middle by a black mass of rock. Trees started out from the precipices and hung over the torrent. Gigantic and exquisitely graceful ferns stretched forward their waving fronds and dipped them in the spray. One fern especially I noticed, which I had never seen or heard of, which crawls like ivy over the stones, winds round them in careless wreaths, and fringes them with tassels of green.

Returning to the upper regions, we followed a path which ran along the shoulder of a mountain. On our left were high beetling crags, on our right a precipice eight hundred feet deep, with green open meadows below. The river, having escaped out of the gorge, was winding peacefully through them between wooded banks, a boat-house at the end, and beyond the wide waters of Tarawara, inclosed by a grand range of hills, which soared up blue and beautiful into the evening air. I had rarely looked on a softer and sweeter scene. . . .

We strolled home. On the way I found what I took to be a daisy, and wondered as I had wondered at the pimpernel at Melbourne. It was not a daisy, however, but one of those freaks of nature in which the form of one thing is imitated, one knows not why, by another.

Kate and her assistant, Marileha, rowed us across the lake, landing us at the mouth of a small river. We took off our boots and stockings, put on canvas shoes which a wetting would not spoil, and followed our two guides through the bush, waiting for what fate had in store for us, Miss Mari laughing, shouting, and singing to amuse Kate, whose head still ached. After a winding walk of half a mile, we came again on the river, which was rushing deep and swift through reeds and Ti-tree. A rickety canoe was waiting there, in which we crossed, climbed a bank, and stretched before us we saw the White Terrace in all its strangeness ;

a crystal staircase, glittering and stainless as if it were ice, spreading out like an open fan from a point above us on the hillside, and projecting at the bottom into a lake, where it was perhaps two hundred feet wide.

The summit was concealed behind the volumes of steam rising out of the boiling fountain from which the silicious stream proceeded. The stairs were about twenty in number, the height of each being about six or seven feet. The floors dividing them were horizontal, as if laid with a spirit-level. They were of uneven breadth—twenty, thirty, fifty feet, or even more ; each step down being always perpendicular, and all forming arcs of a circle, of which the crater was the center. On reaching the lake the silica flowed away into the water, where it lay in a sheet half submerged, like ice at the beginning of a thaw.

There was nothing in the fall of the ground to account for the regularity of shape. A crater has been opened through the rock a hundred and twenty feet above the lake. The water, which comes up boiling from below, is charged as heavily as it will bear with silicic acid. The silica crystallizes as it is exposed to the air. The water continues to flow over the hardened surface, continually adding a fresh coating to the deposits already laid down, and, for reasons which men of science can no doubt supply, the crystals take the form which I have described.

The process is a rapid one ; a piece of newspaper left behind by a recent visitor was already stiff as the starched collar of a shirt. Tourists ambitious of immortality have penciled their names and the date of their visit on the white surface over which the stream was running. Some of these inscriptions were six and seven years old, yet the strokes were as fresh as on the day they were made, being protected by the film of glass which was instantly drawn over them.

The thickness of the crust is, I believe, unascertained, the Maories objecting to scientific examination of their treasure. It struck me, however, that this singular cascade must have been of recent—indeed, measurably recent—origin. In the middle of the terrace were the remains of a Ti-tree bush,

which was standing where a small patch of soil was still uncovered. Part of this, where the silica had not reached the roots, was in leaf and alive. The rest had been similarly alive within a year or two, for it had not yet rotted, but had died as the crust rose around it. Clearly nothing could grow through the crust, and the bush was a living evidence of the rate at which it was forming. It appeared to me that this particular staircase was not perhaps a hundred years old, but that terraces like it had successively been formed all along the hillside as the crater opened now at one spot and now at another.

Wherever the rock showed elsewhere through the soil it was of the same material as that which I saw growing. If the supply of silicic acid was stopped the surface would dry and crack. Ti-trees would then spring up over it. The crystal steps would crumble into less regular outlines, and in a century or two the fairy-like wonder which we were gazing at would be indistinguishable from the adjoining slopes. We walked, or rather waded, upward to the boiling pool ; it was not in that we were to be bathed. It was about sixty feet across, and was of unknown depth. The heat was too intense to allow us to approach the edge, and we could see little, from the dense clouds of smoke which lay upon it. We were more fortunate afterward at the crater of the second Terrace.

The crystallization is ice-like, and the phenomenon, except for the alternate horizontal and vertical arrangement of the deposited silica, is like what would be seen in any northern region when a severe frost suddenly seizes hold of a waterfall before snow has fallen and buried it.

A fixed number of minutes is allotted for each of the "sights." Kate was peremptory with E—— and myself. Miss Marileha had charge of my son. "Come along, boy," I heard her say to him. We were dragged off the White Terrace in spite of ourselves, but soon forgot it in the many and various wonders which were waiting for us. Columns of steam were rising all around us. We had already heard, near at hand, a noise like the blast-pipe of some

enormous steam-engine. Climbing up a rocky path through the bush, we came on a black gaping chasm, the craggy sides of which we could just distinguish through the vapor. Water was boiling furiously at the bottom, and it was as if a legion of imprisoned devils were roaring to be let out. "Devil's Hole" they called the place, and the name suited well with it.

Behind a rock a few yards distant we found a large open pool, boiling also so violently that great volumes of water heaved and rolled and spouted, as if in a gigantic saucepan standing over a furnace. It was full of sulphur. Heat, noise, and smell were alike intolerable. To look at the thing, and then escape from it, was all that we could do, and we were glad to be led away out of sight and hearing.

Again a climb, and we were on an open level plateau, two acres or so in extent, smoking rocks all round it, and, scattered over its surface, a number of pale brown mud-heaps, exactly like African ant-hills. Each of these was the cone of some sulphurous geyser. Some were quiet, some were active. Suspicious bubbles of steam spurted out under our feet as we trod, and we were warned to be careful where we went. Here we found a photographer, who had bought permission from the Maories, at work with his instruments, and Marileha was made to stand for her likeness on the top of one of the mud piles. We did not envy him his occupation, for the whole place smelt of brimstone and of the near neighborhood of the Nether Pit.

Our own attention was directed particularly to a hole filled with mud of a peculiar kind, much relished by the natives, and eaten by them as porridge. To us, who had been curious about their food, this dirty mess was interesting. It did not, however, solve the problem. Mud could hardly be so nutritious as they professed to find it, though it may have had medicinal virtues to assist the digestion of crayfish.

The lake into which the Terrace descended lay close below us. It was green and hot (the temperature near 100°), patched over with beds of rank reed and rush, which

were forced into unnatural luxuriance. After leaving the mud-heaps we went to the water-side, where we found our luncheon laid out in an open-air saloon, with a smooth floor of silica, and natural slabs of silica ranged around the sides as benches. Steam fountains were playing in half a dozen places. The floor was hot—a mere skin between us and Cocytus. The slabs were hot, just to the point of being agreeable to sit upon. This spot was a favorite winter resort of the Maori—their palavering-hall where they had their constitutional debates, their store-room, their kitchen, and their dining-room. Here they had their innocent meals on dried fish and fruit, here also their less innocent, on dried slices of their enemies. . . .

We were now to be ferried across the lake. The canoe had been brought up—a scooped-out tree-trunk, as long as a racing eight-oar and about as narrow. It was leaky, and so low in the water that the lightest ripple washed over the gunwale. The bottom, however, was littered with fresh-gathered fern, which for the present was dry, and we were directed to lie down upon it. Marileha stood in the bow, wielding her paddle, with her elf-locks rolling wildly down her back. The hot waves lapped in and splashed us. The lake was weird and evil-looking. Here Kate had earned her medal. Some gentleman, unused to boats, had lost his balance, or his courage, and had fallen overboard. Kate had dived after him as he sank, and fished him up again.

The Pink Terrace, the object of our voyage, opened out before us on the opposite shore. It was formed on the same lines as the other, save that it was narrower, and was flushed with pale-rose color. Oxide of iron is said to be the cause, but there is probably something besides. The water has not, I believe, been completely analyzed. Miss Mari used her paddle like a mistress. She carried us over with no worse misfortune than a light splashing, and landed us at the Terrace foot.

A youth took charge of us, and led us up the shining stairs. The crystals were even more beautiful than those

which we had seen, falling like clusters of rosy icicles, or hanging in festoons like creepers trailing from a rail. At the foot of each cascade the water lay in pools of ultramarine, their exquisite color being due, in part, I suppose, to the light of the sky refracted upward from the bottom.

In the deepest of these we were to bathe. The temperature was 94° or 95°. The water lay inviting in its crystal basin. E—— declined the adventure. I and A—— hung our clothes on a Ti bush and followed our Maori, who had already plunged in, being unencumbered, except with a blanket, to show us the way. His black head and copper shoulders were so animal-like that I did not altogether admire his company ; but he was a man and a brother, and I knew that he must be clean, at any rate, poor fellow, from perpetual washing. The water was deep enough to swim in comfortably, though not over our heads. We lay on our backs and floated for ten minutes in exquisite enjoyment, and the alkali, or the flint, or the perfect purity of the element, seemed to saturate our systems. I, for one, when I was dressed again, could have fancied myself back in the old days when I did not know that I had a body, and could run up-hill as lightly as down.

The bath over, we pursued our way. The marvel of the Terrace was still before us, reserved to the last, like the finish in a pheasant battue. The crater at the White Terrace had been boiling; the steam rushing out of it had filled the air with cloud, and the scorching heat had kept us at a distance. Here the temperature was twenty degrees lower; there was still vapor hovering over the surface, but it was lighter and more transparent, and a soft breeze now and then blew it completely aside. We could stand on the brim and gaze as through an opening in the earth into an azure infinity beyond. Down and down, and fainter and softer as they receded, the white crystals projected from the rocky wall over the abyss, till they seemed to dissolve not into darkness but into light. The hue of the water was something which I had never seen, and shall never again see on this side of eternity. Not the violet, not the harebell, near-

est in its tint to heaven of all nature's flowers ; not turquoise, not sapphire, not the unfathomable ether itself, could convey to one who had not looked on it a sense of that supernatural loveliness. Comparison could only soil such inimitable purity. The only color I ever saw in sky or on earth the least resembling the aspect of this extraordinary pool was the flame of burning sulphur. Here was a bath, if mortal flesh could have borne to dive into it! Had it been in Norway, we should have seen far down the floating Lorelei, inviting us to plunge and leave life and all belonging to it for such a home and such a companionship. It was a bath for the gods and not for man. Artemis and her nymphs should have been swimming there, and we Actæons daring our fate to gaze on them.

This was the end of our adventure—a unique experience. There was nothing more to see, and any more vulgar wonders would now have been too tame to interest us. We returned to the canoe, and were rowed over the lake and down the river. Flights of ducks rose noisily out of the reed-beds. Cormorants wheeled above our heads. Great water-hens, with crimson heads and steadfast eyes, stared at us as we went by. The stream, when we struck into it, ran deep and swift and serpentine, low-hidden between flags and bushes. It was scarcely as broad as our canoe was long, and if we had touched the bank anywhere we should have been overturned. Spurts of steam shot out at us from holes in the banks. By this time it seemed natural that they should be there as part of the constitution of things. In a few minutes we were at the spot where we had landed in the morning.

Copyright by Underwood and Underwood.

PEARY'S SHIP "ROOSEVELT."

AN ICEBERG IN BAFFIN BAY.

MISCELLANEOUS

Historical Sketch of Arctic Exploration

By ERNEST INGERSOLL

ARCTIC exploration began with the great rise of interest in geography and international commerce which characterized the fifteenth and sixteenth centuries, due to the discovery of America, the improvement in instruments of navigation and topography, and the invention of printing, whereby accounts of voyages came to be widely read. The daring sailors of Norseland—not to speak of earlier, somewhat mythical, voyagers to Ultima Thule—had long known the stormy seas between Norway and Greenland, as far north at least as the borders of the summer ice-drift, where they went to hunt the walrus and the seal in their open boats. Magellan had shown the possibility of sailing to the Far East, whence came goods always in demand and yielding large profits, and where lived millions of men ready to buy the products of the awakening West. But then, as now, the key to that profitable interchange of commodities which is called trade, lay in cost of transportation. For centuries the carriage had been overland, a method slow, limited, and costly. Magellan had shown it possible to sail back and forth around the globe, but the voyage was so long, and so costly, that it was little improvement; and Da Gama had pointed out a scarcely shorter path around Africa. A few "ventures" came by way of the Red Sea, camel-train across the Isthmus of Suez, and through the Mediterranean; but that route was so infested with pirates as to be commercially impracticable.

It occurred to Englishmen that a comparatively short trade route might be found around the north shore of the continents

of Europe and Asia, provided it were possible to sail through those ice-obstructed waters; a valuable commerce might at least, they thought, be established between England and northern Russia, or Muscovy. This especially appealed to the English and Dutch, because by such a route they would avoid the exactions of their traditional enemies the Spanish and Portuguese, then masters of the southern seas, and never more happy than when seizing merchant prizes.

Seeking a Northeast Passage

In 1553, therefore, an English navigator, Sir Hugh Willoughby, was sent north with three small ships, one of them commanded by Richard Chancellor, to study the feasibility of a northeast passage. Willoughby reached Kolgujef Island, then returned to the coast of Lapland and died there in winter quarters with all his sixty-two men; but Chancellor made his way up the White Sea, where he was met by Russian traders, and, going himself to Moscow, he arranged with the Czar for friendly trade relations with England. When the next year he returned to England and reported this degree of success, there was organized and chartered in London the Muscovy Company, an event that had important consequences.

This was followed by further attempts by the Dutch to work their way through a northeast passage, the most notable of which was in charge of Willem Barentz. His vessel reached Nova Zembla and traced its coast some distance to the north. Two years later Barentz went as pilot to another expedition, despatched by the merchants of Amsterdam, which confirmed and extended his discoveries, but ended in being frozen in north of Nova Zembla, resulting in the death of many of the men. Arctic voyagers had not yet learned to foresee the intensity of the cold to which they were to be subjected, nor how adequately to protect themselves against it and against starvation. There were in those days very little means of carrying food other than meat in the roughly salted condition to which seamen were then accustomed; and when this was eaten continuously for several months it tended, with other unhealthy conditions, to bring

about that frightful disease scurvy, which was the bane of all early voyagers.

At last, in June, 1597, the survivors set out in separate boats for the mainland. Barentz succumbed to the hardships and was buried in the waters which now bear his name, but the others reached Lapland, found the other vessel, and were carried home. This expedition was one of the most important of all that had been made, since it ascertained the terrific pressure of the ice-pack upon the north coast of Nova Zembla and proved the existence of open water between that island and the mainland. To this information may be traced the Dutch whale-fisheries, which were not only of great value to the nation, but had an important effect in stimulating arctic exploration.

Willoughby's failure caused attention to be turned to the possibility of passing into the Pacific north of America, the shortest possible water-route between Europe and China or the East Indies, which were at that time the goals of commercial ambition; and for three centuries explorers struggled to find a "Northwest Passage"—a phrase indelibly printed upon the history of arctic research.

Beginning the Search for a Northwest Passage

One of the first seekers was Martin Frobisher, who, in 1576, sailing in a fishing-boat of about 25 tons, found the bay bearing his name and took back the news of a wide space of water near it leading west, that now known as Hudson Strait; he also carried back tons of glittering mica-schist thought to contain gold. A few years later (1585) John Davis, another Englishman, reached the arctic circle on the west coast of Davis Strait, as it is still called; and in two subsequent voyages he rediscovered the west coast of Greenland as far as the present town of Upernivik, and returned convinced that a passage for ships was possible onward through a "great sea, free, large, very salt and blue," opening out to the north.

The formation of the English Muscovy Company has been mentioned. This corporation resumed its efforts toward a northern passage to the East by sending out a ship in command

of Captain Henry Hudson, who in two voyages (1607-08) examined the front of the ice-floe all the way from northeastern Greenland to the Kara Strait, without finding any opening, although once he penetrated north to lat. 80° 23′. In 1609 he entered the service of the Dutch East India Company and again went north in two ships, the "Good Hope" and the "Half Moon," flying the Company's flag. But although he again reached Nova Zembla his crew mutinied in terror, and the Waigat passage was not attempted. The "Good Hope" returned to Amsterdam while the "Half Moon" pushed on across the Atlantic. This is the voyage in which Hudson entered our Hudson River; but this and other important discoveries made by him in lower latitudes have no arctic interest, except that they exploded the theory that a great strait could be found leading through the American continent somewhere about lat. 40° N.

In April, 1610, Henry Hudson was again sent to the Northwest by an association of Englishmen, and in June he entered Hudson Bay. The summer was spent in learning what he could about this inland sea, but the frosts of November locked his vessel in the ice and the months that followed were fraught with great suffering and fear. This culminated in the following June, when a portion of the ship's crew mutinied openly, seized Hudson, his son, and seven disabled companions, put them off in the ship's small boat and set them adrift. No one of the marooned party was ever heard of again. The mutineers then spent some time in pursuit of whales, and finally returned to England, where they were promptly tried and almost as promptly hanged. This expedition had added an immense area and number of details to the map of North America, and had definitely shown that no passage through the continent existed there; but it had also revealed to Europe new whaling and sealing grounds which have not yet been exhausted, and a means of direct approach to the interior of the continent which is likely to be more actively utilized in the future than it has been in the past.

Whaling voyages and scientific expeditions into North American waters now followed one another rapidly, and many

Copyright by Underwood and Underwood

STEAM SEALING VESSELS IN BAFFIN BAY.

AN ESKIMO FAMILY IN PEARY'S SERVICE.

a name on our maps remains as a memorial of some brave voyager long since forgotten by the general public. The best remembered one of this early time is that of William Baffin, who, with Robert Bylot, was the first to enter the great bay which perpetuates his reputation and whose outlines he traced; but he thought it landlocked.

Hudson Bay also became a field of work for seamen acting in the interest of the Hudson's Bay Company, chartered in 1634; and two talented captains, Fox and James, have left their names upon the great northern and southern extensions, respectively, of this Canadian sea.

Meanwhile Russians had begun studying the vast length of their own arctic coast. Not to go farther back, Peter the Great employed a Danish naval officer, Vitus Bering, upon a grand plan to determine the boundaries of Asia, and desired him particularly to ascertain whether or not it was connected with America. Bering made this his first object, and went twice to the North Pacific, where he was finally wrecked and died. Later, in 1770, an ivory-merchant, whose name has been attached to the Liakhov Islands off the mouth of the Yana River, explored that region extensively, finding among other things deposits of fossil (mammoth) ivory, which resulted in attracting many other ivory-hunters, and in the gaining of additional geographical details.

Ross, Parry, Buchan, and Franklin

European wars interrupted exploration till after the Napoleonic disturbance had subsided, when a new and most productive era of discovery began in a renewed searching for a northwest passage by sea, stimulated by large money rewards offered by the British government. Sir John Barrow, for whom several arctic places are named, promoted the earlier of these new efforts, especially one in charge of Sir John Ross, who, in 1818, confirmed Baffin's much-doubted assertions in respect to the shores of Baffin Bay, and then penetrated far beyond into Lancaster Sound, from the western opening of which he was turned back by oddly mistaking low jagged clouds for

mountains lying athwart his path. One of his lieutenants was William Edward Parry. He believed that the search had been prematurely abandoned, and in 1819 returned to the same regions in the ships "Griper" and "Hecla." Disproving Ross's theory that Lancaster Sound was landlocked by sailing through it, he went on through its continuation, Barrow Strait, and explored Prince Regent Inlet, Wellington Channel, and the islands north of Melville Sound since called Parry Archipelago. Parry made two further voyages, taking the "Hecla" each time, but added little to his former successes, and lost one of his ships in the ice. He also later attempted to find the pole, by sledging from Spitzbergen, and reached lat. 82° 45′. This was in 1827. Parry's writings are very readable, and contain careful descriptions of Eskimo life and customs.

Meanwhile (1819) another British naval officer, who was ardent in the scientific branches of his profession, as well as distinguished in seamanship and naval warfare, and who had been with David Buchan in the ill-starred "Trent" polar expedition of 1818, was sent overland to coöperate with others in defining the mainland coast of America. This was Lieut. John Franklin —a name destined to become one of the most famous among the explorers of the frozen North. For several years he and his parties lived and traveled among the Eskimos, tracing the coast-line from a considerable distance east of the mouth of the Coppermine River westward almost to Point Barrow, Alaska, where they came within 146 miles of meeting Beechey's coöperative examination by sea from Bering Strait; and it was out of these trips that we got the valuable treatises upon the natural history of British America, published by his assistants, Hearne and Richardson. This ended in 1826.

Captain John Ross and his nephew James made a second expedition in 1829, and went as far as Parry had done, but curiously failed to recognize Bellot Strait as a thoroughfare, and so missed the thing they were in search of. They discovered Boothia Felix; and, during the three winters spent on its eastern shore, the younger Ross, by sledging, discovered Franklin Passage, Victoria Strait, and King William Land, and largely explored their coasts; but his most important work, "giving

imperishable renown to his name," as Greely declares, was the determination of the position of the north magnetic pole on the west coast of Boothia Felix.

The additions made, and to be made, in respect to magnetism, in the polar regions have always been one of the worthiest and most serviceable objects of investigation in this line of research, having a direct bearing upon the security of navigation. This, with other advantageous facts to be learned only, or best, in the region near the pole, is, however, explained so clearly in Dr. Gerland's article on "Polar Research" (pages 90-96) that it need not be dwelt upon here.

By overland journeys from their trading-posts on Great Slave Lake and elsewhere, the Hudson's Bay Company's men, especially Back, Simpson, Dease, and John Rae, connected various points of the American coast, so that before 1850 it was known with substantial accuracy from Melville Peninsula to Bering Strait. In much the same way Russian sledge-travelers had traced the northern Asiatic coast by descending to the mouths of rivers; but no ship had yet succeeded in passing Cape Chelyuskin, the northernmost point of Asia.

Franklin's Ill-fated Expedition

In May, 1845, the ships "Erebus" and "Terror," which had just returned from the antarctic regions with Sir James Ross, carried Sir John Franklin with 129 men to search again for a northwest passage, and began perhaps the most romantic episode in arctic history. In July they were spoken by a whaler off Lancaster Sound, and then disappeared.

Anxiety grew steadily in regard to them, but not until 1848 did the British government fit out any search expedition. In that year several of these were conducted on land by Ross, Richardson, and Rae, but with no result. In 1851 Rae again started north overland from Fort Confidence, and with two men traveled on foot to Wollaston Land, which he was the first to visit. After various side-trips he proceeded north to Victoria Strait, and so came within fifty miles of where Franklin's vessels, as we now know, had been abandoned. Three years

later this same indefatigable Scotchman discovered evidences of the residence of Franklin's men on King William Land, and the next year various relics were recovered there.

Meanwhile several expeditions by sea had learned little of Franklin's fate but had added vastly to knowledge of arctic geography, McClure's party, in the "Investigator," coming very near to actually making the northwest passage, and failing only because they could not force their way through the ice to Barrow Strait. It was not until later that the whole truth in regard to the Franklin expedition came out. Sir John died on June 11, 1847, on board the "Erebus," both ships having been ice-bound since the previous September; and the ships were deserted in April, 1848. Officers and crews, then numbering 105 men, started overland for the south, hoping to reach and ascend Back's Fish River. The party broke up into smaller groups and one by one all perished. We now know that had they had a little further information the lives of many might have been saved. The record found in a cairn at Point Victory, and some other scattered relics, are all that are left of the expedition, save the world-wide significance of its results and the pathos of its tragic end.

Early American Explorers

The universal interest in the fate of Franklin, and the tireless efforts of his widow to learn the facts, aroused sympathy in the United States, but it was not until 1850 that this took practical form. In that year Henry Grinnell, a merchant of New York, sent into the North two small vessels to take part in the search, but they accomplished little beyond the discovery of Grinnell Land. With them went a young physician, Elisha Kent Kane, who persuaded Grinnell to send him again to the North, less to search for Franklin, whom he had despaired of, than to prosecute explorations in higher latitudes. In 1853, in command of the little brig "Advance," manned principally by whaling men, he made his way straight up to Smith Sound, where, on the Greenland shore of its northerly expansion, since called

Kane Basin, he was stopped by ice and remained a prisoner until rescued in 1855.

Dr. Kane wrote the histories of these expeditions, and especially of the latter one, in books so charmingly expressed, and abounding in such novel information, that they were read like romances in every home in the land, and did more to fire the ardor for arctic discovery which has ever since glowed in this country than anything else said or done previous to the exploits of R. E. Peary. These books should be read by all who are interested in the history of polar research.

Hall and the "Polaris"

Kane's and other books aroused the enthusiasm of a young newspaper man in Cincinnati, Charles F. Hall, who resolved to go to the far North alone; and having, by popular subscription, procured an outfit, he traveled in a whaler to the shores of Cumberland Sound, and there lived and wandered for two years with the Eskimos, finding, among other interesting things, the remains of a stone house built by Frobisher in 1758. This was in 1860-61. Again, from 1864 to 1869, Hall was living with the wandering Eskimo north of Hudson Bay, preparing himself to undertake an expedition which may be said to be the first whose avowed object was to try to reach the north pole. The United States government furnished him the steamer "Polaris," and a small but efficient body of scientific assistants, one of whom was Emil Bessels. The "Polaris" passed through Smith Sound and Kennedy Channel, and finding that the latter, beyond its expansion into Hall Sound, continued northeastward, forming Robeson Channel, Hall stopped his ship and by sledge-journeys reached Cape Brevoort, above 82° N., whence he could see the open polar sea. This was not only far beyond any previous northing, but his work added immensely to our knowledge of both Grinnell Land and northwestern Greenland, and prepared the way for further successes.

This sledge-journey was, however, too great a strain, for Hall had hardly returned to his ship when he sickened and died. His companions sailed southward, but met with extraordinary

misfortunes. The ship's company became divided in a storm which nearly sank the vessel, one party going upon the ice, while the other remained with the broken ship. The former drifted miraculously down to the coast of Labrador, where all were rescued; while those left on the ship reached land, spent a fairly comfortable winter, and got home by their own boats and the generosity of a Scotch whaling-ship. Dr. Bessels and others returned to the North in 1872, and again reached the polar sea, a few miles farther than Hall's record.

In 1875 a British expedition under Sir George Nares reëxamined this same region, learning much more of Grinnell Land; and his sledging parties under Clements R. Markham reached 83° 20′ N. The overland trip of Frederick Schwatka to King William Land in 1879 should also be mentioned.

Voyaging about Spitzbergen

All this time the seas and archipelagoes north of Europe, as well as those north of America, were being questioned. The Norwegian fishermen had been familiar with Spitzbergen waters from long ago, but it was not until 1863 that the group was circumnavigated. The next year Captain S. K. Tobieson sailed around Northeast Land, and in 1870 Nova Zembla was circumnavigated, and the mouth of the Obi reached.

The men who did these feats were sealers or whale-fishers in small stanch Norwegian schooners, such as flocked in Barentz Sea at this period, and they furnished invaluable material, as did the whalers and sealers of American and Scotch ports, for the ice-pilots and crews of the scientific expeditions which now began to go to the North: moreover many of the commanders were trained by amateur service in such vessels.

Julius von Payer, who went to Greenland in 1869, and in the next year participated in a German expedition toward the north pole, east of Spitzbergen, was an Austrian painter as well as staff-officer. He was one of the leaders, the other being Karl Weyprecht, of an Austrian expedition which in 1872-74 discovered and explored Franz Josef Land.

Copyright by Underwood and Underwood

WHALING IN BAFFIN BAY.

Taking the Whalebone (worth $8,000) out of the Mouth of a Greenland Whale.

International Stations, and Greely's Work

Weyprecht embodied the results of his arctic experiences in various important scientific works, and made a strong plea that instead of these miscellaneous, spasmodic efforts, a united attempt should be made by all the nations interested in scientific advance. He outlined a system of coöperation by which stations established in the polar world could be mutually helpful, eliminating the question of commercial or national rivalry, and all working together purely in the interests of science and the elucidation of the many physical problems to which a knowledge of polar conditions alone affords the clue. There resulted in 1879 the International Geographical Congress which convened in Hamburg for the discussion of polar questions. In the winter of 1882 (Weyprecht died the year before) stations of relief and supplies were established both in the arctic and the antarctic regions, according to the plan of the Hamburg Congress, and of a subsequent one held at Bern, which afforded a system of circumpolar coöperation.

The station established by the United States under Lieut. Adolphus W. Greely, U. S. A., in lat. 81° 44′N., on the east coast of Grinnell Land, was one of the earliest. This station, on Lady Franklin Bay, Robeson Channel, was the farthest north of any, and was named Fort Conger. Amply equipped and carefully selected as to its members, it was destined to make some extraordinary geographic exploration, and it collected much valuable data in addition to important weather observation. Dr. Octave Pavy made a pedestrian and sledge expedition to the extreme northern point of Grinnell Land, now called Grant Land, while other parties explored the interior. Lockwood and Brainard, two other members, crossed over to Greenland, and on May 5, 1882, reached 83° 24′ 5″, which, up to that time, was the "farthest north," and for years was the most northern latitude to which the American flag had been carried. In August, 1883, the party left Fort Conger, in expectation of finding a vessel in Smith Sound, but were compelled to go into winter quarters near Cape Sabine, and here the remnant of

the party was found in the following spring by Captain Winfield S. Schley, commanding the government relief ships "Bear" and "Thetis." Lockwood was among the nineteen who had perished, and Greely and his six companions were rescued only in the nick of time. The work of the Greely party was brilliant and permanent.

The Northeast Passage Won in the "Vega"

Meanwhile Spitzbergen had been thoroughly charted by Nils A. E. Nordenskjold, a Swedish nobleman, who alternated with this work trips to the interior of Greenland in 1870 and 1883; and in 1878-79 he reattempted the northeast passage with a brilliant success which has made his name famous.

He obtained and outfitted the steamer "Vega," and arranged that a smaller supply-steamer should accompany him as far as the mouth of the river Lena—a bold proposition in itself, for that was a thousand miles beyond the Yenisei. Nevertheless, this undertaking was carried out; for leaving on July 4, 1878, a month later they were traversing the Kara Sea, and on August 19 passed Cape Chelyuskin, which, up to that time, had defied all attempts. A week later the mouth of the Lena was reached, and the little tender, after transferring her coal and other stores, turned west, and actually sailed back to civilization uninjured.

The "Vega" then hastened on eastward, and came near getting right through to Bering Strait in that one season; but at the end of September the men found themselves frozen into the ice off North Cape (where Captain Cook had turned back in 1778), only 120 miles from Bering Strait. Here they were near shore, the country was inhabited by Tchuktches—a nomadic people, with herds of reindeer, who take the place in Siberia of the Eskimos of arctic America; and the time was well spent in gathering a knowledge of these people and their country, and in making very valuable collections in zoölogy and anthropology.

It was not until July 18, 1879, however, that their prison-gates opened, and the "Vega" steamed on. These waters were

familiar enough to navigators; and Nordenskjöld proceeded straight east, passed down through Bering Strait, and a few months later reached home via the Suez Canal—a second Magellan.

The "Jeannette" Expedition

In the same year (1879) George W. De Long, an American naval lieutenant, was sailing into the western Siberian arctic seas, in command of the "Jeannette," carrying an expedition organized by James Gordon Bennett the younger, but authorized by the United States. She just missed meeting the "Vega;" and having reached the Siberian Cape Lerdze Kamen, steamed northward to lat. 71° 35′. There, in September, De Long was caught in the ice and drifted northwestward to lat. 77° 15′, thus learning that Wrangel Land was really an island.

It was now June, 1881, and the drift came to an end by the crushing of the "Jeannette" in the moving pack. The crew escaped to the ice, and dragged themselves and their loaded boats and sledges through frightful hardships and exertions toward the bleak coast of Siberia. Open water was found at last, and the starving men embarked in their three boats for the mouth of the Lena; but soon they were separated in a storm, and each one proceeded as best he could. One boat foundered in the first gale. Another, in charge of G. W. Melville (now Rear-Admiral, U. S. N.), reached an eastern mouth of the river and ascended it to a Russian village. A third boat, with De Long and others, also reached the Lena delta, but only two seamen were able to proceed afoot to Bulun, a far-away Russian settlement. Melville heard of this, and made haste to start out searching parties, but they were too late. De Long and his crew had died of exhaustion, and it was not until the next season that their bodies and records were fully recovered.

Melville's Account of De Long's Fate

Perhaps no better picture of the terrors of the arctic and its stabbing cold can be found than that which is given by Melville, describing the forlorn place where he found the De Long party:

"A barren plateau, between a small outlying promontory and a bleak weather-riven rock of red syenite reaching to the skies, on which even the mosses and lichens would scarce grow. The raging of the wind and the pitiless sea, and the roar of the black water of the bay dashing over the ice-foot, made the lonesome picture look colder and more appalling. Drifts of ice and snow choked the ravines and hollows; but, saving ourselves and the famished, skeleton-like survivors, not a living thing appeared on the whitened landscape. The region truly seemed to be the most desolate on the face of the earth. It looked as though the curses of ten thousand witches had descended upon and blasted it, and even the birds would not dare to take their flight across the lifeless land, lest they, too, fall victims into the death-gap below.

"Struggling up the valley of death against the frantic wind from the low point to the westward of the camp, where we managed with difficulty to effect a landing in our whaleboats, we first came upon the remains of the winter habitation, a parallelogram of four walls about three feet high built of loose stone, the inside dimensions being 18 by 22 feet, with a tunnel or covered way facing the mountain to the southward. This hut had been roofed over with the whaleboats turned upside down and covered with the sails and tent-cloths; the smoke-flue made of old tin kettles bound with bits of canvas was thrown to one side, and water had risen in and about the wretched dwelling-place to a height of eight inches, concealing much of the foul evidence of squalid misery in which its poor occupants had lived. Cast-off fur and cloth clothing, empty tin cans, and the sickening filth of twenty-five men for nine months lay heaped and scattered about, a veritable Augean scene."

Facts Regarding the Siberian Sea

Despite its dreadful outcome, the scientific results of this expedition were important, physically and geographically. "They covered some 50,000 square miles of polar ocean, and clearly indicate the conditions of an equal area between their line of drift and the Asiatic coast." De Long believed the

ocean bordering Siberia to be a shallow sea, dotted with islands; and his conclusions have been confirmed by the admirable scientific work since of Toll, Bunge, and other Europeans who have explored that part of the arctic realm and shown that a broad "continental shelf" borders northern Asia and Europe, beyond which there is a sudden descent to the depths of the true polar sea.

Moreover, the steady drift of the "Jeannette," helpless in her ice-pack, gave a clue to the probable direction of the currents in that region, which led Nansen to believe that he could drift right across the polar space—a project practically carried out, as will be related presently.

Early Efforts of R. E. Peary

Some years now elapsed during which little was done in this department of geographical work, when the public began to hear of an American naval civil engineer, Lieut. Robert E. Peary, who had previously been known only as chief engineer in charge of the government survey of the proposed route of the Nicaragua Ship Canal. He was a Pennsylvanian and a graduate of Bowdoin College, who had entered the staff of the United States Navy in 1881. In 1886 he made a reconnoisance of the Greenland ice-cap near Disko, and then began thorough study and preparation for further arctic work, to which he was intensely attracted. In 1891-92 Peary returned to northern Greenland, and, with E. Astrup, journeyed from Melville Bay across the lofty, ice-buried interior to the Atlantic coast at Independence Bay (lat. 81° 37′ N.), an unprecedented foot-march of 1200 miles. "He proved that the northern extension of the great interior ice-cap ends below lat. 82° N. He also established the insularity of Greenland, and ascertained the existence of detached ice-free land-masses north of the mainland. . . . His ethnological work among the Eskimos known as the Arctic Highlanders (from Cape York to Smith Sound) was the most thorough and noteworthy that has been done in that region." The name Peary Land remains written across the map of northwestern Greenland, and Peary Channel is the

name of the water between it and the land-masses north of it.

On this voyage (but of course not in the sledging) Peary was accompanied by his young wife, and at Etah was born to them their first child, a daughter. Mrs. Peary has written an entertaining book, "My Arctic Journal," relating the experiences of that winter with the Eskimos, who were immensely interested in her and her baby, who was named Marie Aghnito—Marie, the Snow-child—and thrived excellently.

Nansen's Drift in the "Fram"

At this time there was in progress one of the most unusual and daring projects ever undertaken. While Greely was retreating in 1882, a Norwegian, Dr. Fridtjof Nansen, was voyaging in the Jan Mayen and Spitzbergen seas in a sealing-ship, as a student of marine zoölogy. He observed fragments of the wreckage of the "Jeannette" on the coast of Greenland, which must have drifted thither from northeastern Siberia. This and much other evidence convinced Dr. Nansen that a current flowed across the unknown polar space from the neighborhood of Alaska to the northeast coast of Greenland, and thence became the great arctic current that we recognize south of Iceland. He argued that if a vessel could find this current north of eastern Siberia, she would be moved with it until she emerged into the Atlantic. Incidentally she might drift directly over the pole.

With this in view, he raised funds to build and equip a small wooden vessel, the "Fram," furnished with both steam and sails. She was so shaped by the roundness of her bottom, and so amazingly braced and strengthened within, that before any "nips" of the ice could crush her, the pressure would lift her out of water—as, in fact, happened many times in the course of her wonderful excursion. Nansen chose twelve companions, and though some of them were educated men of science, others skilful sea-captains, and others common sailors, all lived and worked together in one cabin as brothers—the happiest and healthiest lot of men that ever ventured into the hyperborean kingdom of desolation.

THE FARTHEST POINT NORTH

Nansen's March toward the Pole

This expedition was fortunate in getting easily to a point northeast of the Siberian islands, where they were frozen into the ice and began a slow drift in the direction expected, that is, west-northwest to lat. 85° 57′ N., lon. 70° E., when the ship gradually veered southward and after thirty-five months' besetment escaped into open water north of Spitzbergen and made her way safely to Norway. In March, 1895, Nansen and a companion, Johannesen, left the ship and with dog-sledge and kayak made a rush toward the pole. They reached lat. 86° 4′ N., in lon. 96° E. before being forced to turn back by impassable ice and failure of provisions.

The extraordinary courage and endurance of these men in their perilous march back to land is one of the most thrilling chapters in the chronicle of polar research. At last, after almost superhuman labors and escapes from freezing, drowning, starving, and the attacks of famished bears, the two reached Franz Josef Land, and spent a winter in what amounted to solitary confinement in a hut constructed of earth, stones, and walrus-hides. The next spring they plodded on, incidentally learning much that was new in respect to this remote island, and by good chance found the camp of the English Jackson-Harmsworth Expedition, which carried them back to Norway in the ship "Windward." A pleasing coincidence was the fact that the "Fram," which had been left in the command of Capt. Otto Sverdrup, returned the same week. Nansen's "Farthest North," and a later book by Johannesen, are narratives of these adventures and their accompanying accessions to knowledge, the most prominent of which was the fact that the water over which the "Fram" drifted was found to be of great depth and rich in marine organisms.

Peary in North Greenland

Coincidently Peary had been busy. During 1893-94 he was completing the investigation of the northern borders of Greenland. The summers of 1896 and 1897 were occupied by

trips to the Melville Sound region, in the course of which he obtained those huge meteorites which have been the admiration of mineralogists ever since they were placed on view in New York. Disdaining rest after his return, he devoted the winter of 1897-98 to preparations for an expedition so extensive that it was to consume four years. His ship was the "Windward" —the same which had brought Nansen home from Franz Josef Land, and which had been given by Mr. Harmsworth (now Lord Northcliffe). The expenses were paid by a committee of American subscribers, of whom Morris K. Jesup of New York was foremost; and until his death in 1908 this gentleman continued to be the most liberal supporter of Peary's arctic enterprises. These subscribers formed in 1899 the Peary Arctic Club, which still exists, fostering interest in polar science.

The "Windward" passed the winter of 1898-99 in Allman Bay, and its commander made exploratory journeys on Ellesmere Land, where he had extraordinary sufferings, losing seven toes by freezing. The next summer a supporting ship, the "Diana," with Mrs. Peary and a scientific party as passengers, reached him, and later both ships returned southward, leaving Lieutenant Peary and a few others at Payer. In the early summer of 1900 the "Windward" was again sent north with Mrs. Peary and her daughter, who picked up Peary and went with him in the ship to a winter harbor near the polar coast. As nothing was heard from them for a year, the "Erik" was despatched by the Peary Club with supplies, and this party met the "Windward" in Foulke Fiord, starting homeward with all well on board.

During this absence Peary had rounded the northern limit of the Greenland Archipelago, had reached lat. 83° 50′, the highest point then attained, and had done important scientific work. He was not yet ready to return, however, and taking the new supplies, he passed a third winter in the North, whence he was brought back by the Club's ship in the following season.

Work by European Explorers

During these years an expedition of Norwegian men of science, led by Otto Sverdrup, who had commanded the "Fram"

after Nansen had left her for his sledge-trip, and using that same old ship, had spent four seasons continuously in the waters south and west of Ellesmere Land, whose western side they carefully surveyed, increasing the map by much previously unknown territory; and they brought safely back valuable information and large collections.

In the winter of 1899-1900 an Italian venture under the Duke of the Abruzzi, in the "Stella Polaris," established favorable quarters north of Franz Josef Land. Cagni, one of the staff—the Duke of the Abruzzi unfortunately being unable to go—undertook a sledge-journey from this base, and actually distanced Nansen's record, reaching lat. 86° 33′ 49″ N. This same region was a field of American explorations in 1902, and a scientific expedition subsidized by the French Academy of Sciences followed in 1903. The Ziegler expedition in the "America" set out from Trondhjem, Norway, for Franz Josef Land the same summer, and in the autumn a Canadian party left Halifax in the "Neptune."

Of these, the Ziegler expedition was by far the most important. William Ziegler, an American, was the generous and intelligent supporter of this endeavor to reach the pole by way of the European Arctic Ocean. Anthony Fiala, who had distinguished himself in an earlier Ziegler experiment, was placed in command, and in June, 1903, left Trondhjem in the steam whaling-vessel "America." Conditions were unusually favorable, and the party established themselves at Teplitz Bay, Crown Prince Rudolf Land, in lat. 81° 50′ N., which was reached in August, 1903. Camp was established on shore, but in November, while a considerable store of provisions was still on board, the "America" was crushed in the ice, and eventually she drifted away and was lost. Two years were spent in fruitless efforts to get north, and then all returned in a rescue steamer.

Amundsen Navigates the Northwest Passage

In 1904 the Norwegian Capt. Ronald Amundsen set out in a small sailing sloop, his object being to locate anew the north magnetic pole. This had been discovered by Ross, in 1832, on

the southeast triangle of Boothia Felix, but it was supposed to have traveled a few degrees eastward since Ross had fixed its coördinates. Amundsen, with a handful of men, and the "Gjöa," a vessel of only 47 tons, succeeded in making the northwest passage, as well as in accomplishing the declared object of his expedition. Entering Lancaster Sound from Baffin Bay, in June, 1903, the Norwegian captain followed Parry's old route of 1819, and reached King William Land, that region forever associated with the sad fate of Franklin's men. This was the field for his scientific endeavors, and his survey included the coast and waters of western Boothia, south to King William Land, and as far west as Victoria Land. He collected many data respecting the phenomena of magnetic variation, inclination, and intensity, and sent the results to Nansen, hermetically sealed in a metal tube. This survey accomplished, Amundsen resumed his course in his little single-stick vessel. From Victoria Strait he reached the channel leading westward between the arctic archipelago and the American mainland—the route discovered by the Franklin party, though not credited to them until many years of search had collected the pitiful tokens of their line of travel. The "Gjoa" was, then, the first ship to accomplish, without serious difficulty, the northwest passage. It followed the Franklin course, and avoided the hardships of McClure's more northerly course when, in 1850, he brought the "Investigator" from the west to within 25 miles of the open water of Barrow Strait, and was obliged to leave her there, although he and his crew reached Belcher's ships and returned to England. Thus McClure's men had made the passage, but no ship had done so previous to the "Gjöa."

Here, it may be remarked, the comparatively shallow water (indicating that the western hemisphere is also extended in a continental shelf) insures in summer an open sea, since drifting fragments from the polar pack ground farther out where the deep water begins. Moreover, the coast is "tundra" land, or bare, and being low, has no glacial formation to fill the channels with icebergs.

Amundsen arrived at the mouth of the Mackenzie River in

September, 1905, and there found some whalers who were caught in the ice. They told him that the political situation was strained between Norway and Sweden, and, being anxious to learn what had happened, as well as hear from his family, he determined to march south to the Yukon telegraph station at Eagle City. It was a trip of seven hundred miles on snowshoes, and had only been made once or twice before by trappers. With Captain Magg of the whaler "Bonanza," he set out. Four weeks later (December 5, 1905) they arrived at their destination. The people could not believe that he had made the trip from Europe via the Arctic Ocean, or that he had come from the mouth of the Mackenzie on snowshoes; and his arrival in San Francisco a few weeks later was justly the occasion of a great celebration.

The North Pole a Geographical Prize

A season of rest but not of inaction for Lieutenant Peary followed his return to New York in 1902. Hitherto geographical study of the extent and character of the land-masses and ice-fields in the extreme north, and of the climatic conditions, had been the foremost matter in his mind, with greater results than had fallen to the lot of any other single man. Now Peary set himself to reach the north pole, which he described as "the last great geographical prize the earth has to offer." In respect to this he wrote to the Secretary of the Navy, when applying for further leave of absence, as follows:

> "The attainment of the north pole is, in my opinion, our manifest privilege and duty. Its attainment by another country would be in the light of a reproach and a criticism.
>
> "The sense of all the foremost geographers—practical and theoretical—now converges upon the Smith Sound or American Route, along which I have been working for years past. Other routes have been eliminated. If we delay in preëmpting this route, some one else will step in and win the prize.
>
> "I believe that my experience, gained in years of practical work, my special method of travel and equipment,

the evolution of years of practical work; my personal acquaintance with every feature of my chosen route and region, and my command of the full resources and utmost efforts of the entire little tribe of Whale Sound hyperboreans, who have lived and worked with me for years, give substantial reason for anticipating a successful outcome to an expedition based on the above lines."

The "Roosevelt's" First Voyage

To accomplish this and other intended work, a more suitable vessel was needed than was available, and the Peary Club resolved to construct one. Consequently, plans were made for "a ship which should combine the necessary qualities of power, the smallest consumption and the largest capacity for coal, of a model which should withstand shock and pressure, which should surmount and crush floes, which should respond on call with full power of engines—in short, a ship which should be the product of actual experience."

Such a ship was built at Bucksport, Me., christened "Roosevelt," and on July 4, 1905, departed for the North, well found. Eighteen months later she returned, badly crippled, but with all on board in good health.

She brought a story of splendid endeavor, including a new record of approach to the pole. The ship was forced farther than ship had ever gone before—clear through Robeson Channel and into the actual polar sea, where it turned west and crept along the coast of Grant Land to the headland named Cape Sheridan, and there into winter quarters. All interest and efforts were centered upon the proposed rush toward the pole, which began as soon as the dawning light of spring made it possible.

Peary gets "Farthest North"

There were four parties, each with dogs, Eskimo drivers, and hunters. Long ago Peary learned that the Eskimos and the dogs held the secret of northern success. In two days they were halted by a stretch of open water. After staying in camp

for a week, they took a dangerous chance and went across a layer of thin ice that had formed. The main party, led by Peary, was cut off from the others by a blizzard which caused a delay of five days. A continuation of the rush northward followed. Photographs brought to New York showed the sledgers' discouraging experiences among giant humps of ice and pressure-ridges, and at last, with the provisions nearly exhausted, the chief had to give orders to turn back, on April 21, 1906.

He was then in lat. 87° 6′ N., or within 203 miles of the pole, the nearest point yet reached; and but for the delays in the first part of the dash he was convinced that he could have made the pole. Describing his feelings afterward, he said it was the saddest day of his life. He felt no joy over his "farthest north" mark, but only disappointment.

On the way back open water stopped them, and at the end of two days' camping the provisions were all gone. They ate the weakest dogs just before making their perilous run over a thin and wavering ice-strip. A skirmish-line, with each man fifty feet from his neighbor, was formed to go across, and no sooner had the last man reached firm ice than the strip parted behind him. Had they delayed the venture a few minutes, all of them probably would have perished.

When they arrived at the Greenland coast, men and dogs were emaciated, but the Eskimos got them several hares—the first good food they had tasted for weeks. Starting on again, they came across tracks in the snow, and trailing them, discovered Clark and three Eskimos from one of the supporting parties, nearly dead from starvation, and ready to give up hope and die, but Peary found and killed seven musk-oxen, which provided food enough to carry them to the ship.

Valuable Results in 1905-06

The dash over, Peary set out to establish hitherto unknown coast-lines. Traveling westward along the northern shore of Grant Land, he planted the flag on Cape Columbia, on the most northerly point of the American archipelago. He then

left a record on the northernmost point of Greenland. So, including Nansen's previous records, the North American section of "farthest north" was rather well charted geographically, and the only really unknown portion of the arctic circle that remained, except for the territory immediately at the pole, was the section of Siberia. Thus the "Roosevelt" returned home, reaching Cape Breton on November 23, 1906, with a truly great record of scientific achievement.

This expedition has been dwelt upon at length because of the great service of its lessons. One of these was that the polar ice opposite this coast was steadily drifting eastward to meet the westerly drift from the eastern Siberia toward the Atlantic. Another was the assurance that it was not the cold that presented the greatest obstacle, but the difficulty of carrying provisions. The success of any sledge-dash, Peary concluded, depended upon the ability to make speed enough to keep the party fed all the way up to the pole and back.

The Bradley Polar Expedition

In the summer of 1907 Dr. Frederick A. Cook*of Brooklyn, N. Y., went to the North in a Gloucester schooner, as a guest of John R. Bradley, a resident of New York known as a hunter of big game in various lands. The departure was unostentatious, and the object of the trip was stated to be a summer's shooting and collecting excursion. It was observed, however, that an immense quantity of stores was loaded, and much of such equipment as only a polar explorer would require. The schooner left Gloucester, July 3, 1907, and reached Smith Sound in the latter part of August. Here numerous Eskimos were found in good condition, having been successful in the season's hunting, and well provided with strong and healthy dogs. Dr. Cook now announced in letters sent back with Mr. Bradley, who after a season's hunting returned to New York, that, so far as he was concerned, this was an expedition in which he intended alone to try to reach the north pole; and that, as the conditions were propitious, he had remained behind for that purpose. The yachting cruise thereupon became the Bradley Polar Expedition.

*See note page 477.

Copyright by Underwood and Underwood.

PRESIDENT ROOSEVELT'S FAREWELL TO PEARY.

DR. F. E. COOK ON SKIS.

At Annooktok, some twenty miles north of Etah, Cook erected the small house taken with him in sections, and assembled his supplies, which were sufficient for three years. With him remained an assistant, Rudolph Francke. These two spent the next few months in preparing the equipment in which the journey toward the pole was to be made, and in selecting and training the Eskimos and dogs that were to be taken along. Mr. Francke remained behind in charge of the property left at Etah.

To pass the winter so far south (700 miles in a straight line from the pole) was contrary to all theory and practice; but Cook argued that by doing so, and starting as soon as the dawning light would permit, he would have far less trouble from open water than later in the season, while the cold could be endured; and that by going across Grinnell Land to the northern point of Axel Heiberg Land before embarking upon the Arctic Ocean, he would be traveling through a country abounding in game, and so would find sustenance for his men and dogs. Moreover, leaving the land so far west would enable him to take advantage of the eastern drift of the polar ice, hereafter explained.

By the middle of February, 1908, all was ready, the arctic night was waning, and a start was made, the party consisting of Dr. Cook, ten Eskimos, and more than 100 dogs, drawing eleven loaded sledges. They crossed Smith Sound and struck into the snowy and mountainous heights of Grinnell Land. The difficulties of travel were enormous; the cold experienced (reported at 83° Fahrenheit) was greater than had ever been recorded; progress was slow; but game—musk-oxen, reindeer, bears, hares, and foxes—abounded, and all hands, including the dogs, were well fed from day to day and kept strong. Five weeks later the expedition reached the northern extremity of land at the mouth of Nansen Sound, and here six Eskimos, with half the sledges and dogs, were sent back. They reached Etah in safety and reported that Dr. Cook had made a base-camp on the shore, and with the remaining Eskimos and dogs had set out for the pole.

As this unheralded expedition was destined to become very conspicuous it will be well at this point to tell briefly who this daring explorer was.

Sketch of Dr. Cook

Dr. Cook was born in 1865, at the village of Callicoon Depot, N. Y., of parents, German in birth, who originally spelled their name Koch. His father was a physician, but died when Frederick was six years of age, after which the family had a struggle with poverty until the children were of an age to contribute adequately to the family purse. This permitted Frederick little schooling, but when later the family moved to Brooklyn, and the boy went to work with a merchant, he took advantage of the public night-schools to get further education. Of indomitable ambition and perseverance, he resolved to study medicine, and worked half the day and night in order to pursue his studies, which were completed in six years, after which he married and began practice in Brooklyn. A year later, however, his wife died, and Dr. Cook yielded to his longing for travel and went with Peary in the "Kite." This voyage, in 1891, brought Cook his first experience in arctic campaigning, especially in sledging, for he tramped to lat. 82° in northwestern Greenland.

Although after his return he resumed in Brooklyn the practice of medicine, Dr. Cook made a second trip to the arctic, in the supporting yacht "Leta," in 1893, and then organized an expedition of his own for 1894. This was intended as a scientific reconnoisance, and the party included several well-known physicists and naturalists. The vessel chosen, the "Miranda," was soon seen to be unsuitable for the purpose, and had hardly left St. John's, Newfoundland, when it collided with an iceberg and had to put back for repairs. Resuming its voyage, it was presently half-wrecked on reefs near Sukkertoppen, and everybody had to go ashore. The aid of a Gloucester fishing schooner was presently secured, and the expedition reëmbarked, towing the "Miranda" until bad weather intervened and she sank, with all the property on board. Nevertheless, the scientific notes and observations made were of substantial value.

During 1897-99 Dr. Cook was acting as surgeon with an expedition for antarctic exploration in the "Belgica," the pro-

ductive value of which was much enhanced by Cook's narrative, "Through the First Antarctic Night."

In 1901 Dr. Cook went north in Peary's supply steamer "Erik," but this was hardly more than a pleasure-trip. Two years later Alaska attracted him, and he made an ineffectual attempt to climb the isolated and lofty Mt. McKinley. In 1906 he returned to Alaska, with a party of mountaineers and scientific assistants, and made a new attack upon the mountain. Repeated ascents were made from various points, only to be baffled by the summit cliffs. Discouraged, his companions left him, supposing that he was about to follow. It was some time, however, before he returned to the coast, when he reported that he had suddenly resolved to make one more trial. With a single companion—one of the camp-hands, the others being away on a hunt—he announced that from a new base he had climbed to the top of the peak, which he found to be 20,300 feet in altitude, exactly the altitude trigonometrically calculated by Robert Muldrow of the U. S. Geological Survey in 1900. All of his Alaskan travels, including the ascent of Mt. McKinley, were related in a book entitled "To the Top of the Continent."

It is thus seen that Dr. Cook was by no means inexperienced in travel in cold latitudes when he undertook the adventurous quest upon which he disappeared from the world in the spring of 1908.

The Peary Expedition of 1908

It was with peculiar confidence that Peary looked forward to his next attempt, which he hoped could be made in the summer of 1907, but numberless difficulties, most of all lack of money, stood in the way. The Peary Arctic Club was rather at a standstill, not only on account of the commercial depression which just then made every one feel poor in pocket and anxious in soul, but Mr. Jesup was ill, and his death in January, 1908, seemed a paralyzing blow to those intent upon the plan. Peary, however, made heroic and ceaseless efforts, and finally procured funds and assurances sufficient to outfit the "Roosevelt" and provision a party to try for the pole in 1908. The party

included the experienced Robert Bartlett as sailing-master, Prof. Donald B. McMillan, a trained explorer and educator, as first assistant, Prof. Ross G. Marvin, of Cornell University, Dr. J. W. Goodsell, surgeon, George Borup, a young scientific assistant, and the chief engineer and several of the men who had previously served in his crew.

The "Roosevelt" looked rough when she left New York on the morning of July 8, 1908, and proceeded to Oyster Bay, Long Island, where President Roosevelt was then residing, for there had been no money to spare for paint and niceties. The President and members of his household boarded her, and after a pleased inspection, bade the expedition a hearty farewell, receiving from its commander the assurance of great confidence of success.

The voyage was interrupted in Baffin Bay by a terrific storm which inflicted so much damage that a delay was necessary at Etah to make repairs. To this point went also a supply steamer carrying coal to be stored for use on the return journey. Here, too, were gathered a large number of Eskimos of the Highlander tribe, which Peary had been nourishing for years, with a great number of dogs, and an abundance of food prepared in the shape of walrus carcasses. Twenty-two Eskimo men and their families, and 226 sledge-dogs were embarked, and then the "Roosevelt" proceeded northward, on August 18, while her tender came south.

Cook announces Success

For many months nothing was heard of either of these bold men racing toward the mysterious northern axis of the globe, and those most interested were beginning to feel anxious, when the world was startled by a laconic telegram from Dr. Cook, dated Lerwick, Shetland Islands, September 1, 1909, announcing that he had reached the north pole and was returning on a Danish government steamer. This was followed by a long telegram to the "New York Herald," and on September 4, Dr. Cook arrived at Copenhagen, where he was received with immense popular rejoicings and distinguished honors from official and

scientific bodies. His story was quickly learned and notified to the whole world, which replied by enthusiastic congratulations from every civilized country.

Dr. Cook stated that after sending back half his party he had started, March 21, on his straight-north dash toward the pole, taking with him five Eskimos and forty-four dogs, dragging provisions for eighty days; he also carried a collapsible canvas boat and the best obtainable instruments for astronomically determining his position from day to day. The party struggled through the rough space of ice near shore, and after reaching the better surface of the outer pack three Eskimos were sent back, and two, the youngest and strongest of the whole party, were kept for the further work. On March 30 Cook recorded lon. 86° 36′ W., and lat. 84° 17′ N. Land was seen west between the 84th and 85th parallels, but could not be examined. The going steadily improved as northing was gained at an unprecedented rate of speed for polar travel—slightly less than 15 miles a day; and beyond the 87th parallel the ice was smooth and little broken, having much the appearance, Dr. Cook notes, of land-ice. When cracks occasionally opened they were almost immediately closed by the continued intense cold, which kept about 40° F., below zero.

On April 14, when only about 100 miles remained to do, the overworked, underfed dogs were succumbing, but the men hurried on, teams and strength sufficed to accomplish this terminal distance, and Dr. Cook reported that on April 21 he had the inexpressible satisfaction of standing on the spot where latitude and longitude converge upon a point equidistant in all directions from the equator, so that wherever you look is south.

Two days were spent here in rest and repeated observations for position. There was nothing to see anywhere but a plain of ice and snow, and not a trace of life. There would have been nothing to stay for even had shelter and provisions been abundant; but death by freezing or starvation would be the penalty of delay, and the return path was taken with all possible haste. With lightened sledges, and the sense of a race for life, an even greater speed than on the northward run was main-

tained at first, but below the 87th parallel so much fog, open water, and generally bad conditions were encountered, that the men went slowly, and wandered in the incessant fog and snow far west of their intended landing on Axel Heiberg Land. Unable to reach that haven, they were compelled to make their way as best they could down the western shores of Crown Prince Gustav Sea, subsisting on the country, which sometimes left them for two or three days together without food. Finally, by aid of their collapsible boat—which served, when not afloat, as a sort of sledge—they reached the southeastern extremity of Ellesmere Land via Jones Sound. There they encamped during the winter of 1908-09. In the spring of 1909 they made their way, through great hardship and hunger, up the western coast of Smith Sound, and crossed over to Etah. Here Dr. Cook found Harry Whitney, an American hunter, with whom, he said, he left his instruments, certain records, and other property, while he himself proceeded by sledging, southward to Upernivik, where he awaited the arrival, in August, of the Danish Steamship on which he sailed to Copenhagen.

Lieutenant Peary Reaches the Pole

Meanwhile, what of the other lost one—Robert E. Peary? For all thoughts turned sympathetically toward the man who had been heroically and intelligently striving after this prize for almost thirty years. The answer came on September 7, 1909, with startling suddenness, in a wireless telegram from Battle Harbor, Labrador:

"*Stars and Stripes nailed to the Pole.*—Peary."

If the time and method of the announcement of Dr. Cook's achievement were dramatic, what shall be said of the fairly theatrical entrance of Peary upon the scene, with this curt statement!

A day later a brief sketch of how the pole was reached was published in the "New York Times" from his hand, and soon afterward a more detailed story appeared.

When in August, 1908, Peary vanished from view in the fogs of Kane Basin, he found both ice conditions and weather fairly kind until he had reached the northern outlet of Robeson Channel, where the ship was much delayed and nearly wrecked. She was, however, forced on into the Arctic Ocean and steered west to an anchorage at the mouth of Sheridan River, near Cape Joseph Henry. It was now September 5, and the advanced state of the season compelled great diligence in landing supplies for the land parties and preparing for the long winter.

As soon as practicable, depots of supplies intended for the use of the great polar sledging trip to be made in the spring were established all along the coast as far west as Cape Columbia. This labor alternated with inland trips which were productive not only of many additional details to the map of Grant Land, but also of much game, for reindeer, bears, musk-oxen, hares, etc., were numerous even to the coast.

The moment in early February, 1909, that the returning light permitted, the polar search was put under way, successive parties driving heavily laden sledges to Cape Columbia. This far westerly point of departure from the land was chosen in order to allow for the easterly drift of the ice which lay between the land and the pole, as has been mentioned. When all had gathered at this rendezvous there were seven white men, 59 Eskimos, 140 dogs, and 23 sledges.

All who have visited the Arctic Ocean in this part of the world have encountered much the same situation; namely, a shore strip about 100 miles wide of ice which is constantly breaking up and moving about, ever trending eastward, under the drag of currents and winds. Outside of it is always found a strip of more or less open water, called "the big lead" or lane, beyond which lies a sort of vast island of never-melting and comparatively motionless ice, which covers the polar space within about lat. 83°. This inner or polar ice-field is fairly smooth, while the much-disturbed band between it and the shore is extremely rough, owing to repeated breaking, crowding together, and freezing into those jagged upturned masses called hummocks or pressure-ridges.

Peary's Successful Dash Northward

Late in February a pioneer party was sent ahead to break a way through this rough region, and Peary and the caravan followed on March 1. The party now numbered 7 white men, 17 Eskimos, 133 dogs and 19 sledges. The difficulties were great, and on the 4th all overtook Bartlett, stopped by a lake of open water, which held all on its bank until the 11th, when it was crossed. By the 14th the going had become good, but there Dr. Goodsell turned back according to program, and McMillan was obliged to return because of frost-bitten feet. The temperature was −59° F. Some open leads now troubled them, but the tenth march carried them to lat. 85° 23′, where Borup was turned back. Bartlett here went ahead 20 hours before the rest started. As soon as he was overtaken he went on and the main body occupied his camp; thus Peary slept while the pioneers marched, and vice versa, yet all parties were in touch daily, and a road was broken for the heavy sledges. Steady progress was thus made to lat. 86° 38′.

It was here that Marvin was turned back with his division, and went to his death, for he hastened some miles ahead of his men, and in crossing a lead alone he was drowned, so that not even his body could be recovered by the Eskimos, who continued with the sledges to land.

The party from this point consisted of 9 men, 7 sledges, and 60 dogs. As they struggled north obstacles and dangers multiplied for a time, and the narrowest escapes from death are recorded as the ice broke up around them; moreover, the pressure of a gale from the north robbed them of hard-earned distance by pressing the ice back toward the south. At the 88th parallel Bartlett was ordered to turn back, as had been arranged, Mr. Peary desiring that no other white man than himself should actually reach the pole at that time; but Captain Bartlett had had the satisfaction of distancing all previous records by many miles.

There now remained Peary, his negro servant Henson, who had been his companion in exploration for years, and four

CONQUEST OF THE NORTH

MAP SHOWING LATEST ACHIEVEMENTS IN POLAR DISCOVERY

Eskimos. The dogs were in good condition, and the party had supplies for forty or even fifty days. The gale had ceased, the ice was hard, and weather calm and clear. It was now April 1, and Peary's plan was to push the speed to 15 miles a day, or better if possible. This terrific program was carried out, for no one spared himself, and the going was more favorable than could be expected; but it was so bitter cold that even the natives complained. After the 89th parallel had been passed, however, the air grew decidedly warmer, while the sledding improved. On the morning of April 6 the final march was rushed forward, and Peary stood at last at the pole—an unmarked, astronomical point in an enormous plain of restless ice!

Some thirty hours were spent there in taking all sorts of scientific notes, observations, and photographs. Then began a headlong race for home, which was attended with remarkably good luck, and unprecedented speed, and took Peary and the five hardy and faithful men who had stood beside him at the pole back to the safety of the land and the ship.

The earliest opportunity to escape from her icy bonds was embraced by the "Roosevelt," and the end of the summer found her and all her company, save Marvin, back in civilized waters.

Early in October the stout little ship, reached New York, and with Commander Peary on the bridge, took part in the naval parade up the Hudson which was one of the notable features of the great Hudson-Fulton celebration of 1909. Mr. Peary was received not only with the acclaim of popular enthusiasm but with unquestioned honors by the scientific world.

NOTE.—The above account of polar travel (as well as of mountain-climbing) by Dr. Cook was based on his own reports. As those reports form part of the records of exploration, they rightly hold a place in this historical summary. The subsequent discrediting of Cook, ranking him among great impostors, and his apparent confession by flight and concealment, are known to all the world. The lesson of this imposture, and of all like deceptions, should impress itself deeply upon the minds of young readers, and should prove an effectual deterrent to false ambitions.

Animals of the Realms of Snow

ONE of the most surprising things brought out by the progress of advance toward the north pole was the knowledge that many forms of animal life were to be found in abundance as far north as the land extended, and, in the water, much farther. Whales go as far as open water is to be found, and would range all the polar seas no doubt, were they not usually frozen over so unbrokenly that a whale could not find places in which to rise and breathe the air. The same is true of seals and walruses.

The presence of these marine mammals shows, what is plain from other evidence, that fishes, mollusks and other suitable food for them abound in those remote waters. These large sea-animals are the mainstay of the Eskimos, all of whom make their homes close to the water, although in summer they wander a good deal inland, except in Greenland, whose interior is a barren waste of glaciers and snow-fields. Upon the walrus they depend for winter dog-food, and immense quantities of its flesh are gathered during the summer and stored for that purpose, while the thick hide is put to many good uses.

The commonest seals are the bearded and ringed, which are seen lying on the unbroken ice in spring and early summer. When the ice in Smith Sound and its neighboring waters breaks up, the saddleback or harp-seal is occasionally met with, and the bladdernose and common harbor-seal are more often encountered.

The bladdernose seal is 9 or 10 feet long, and 400 to 600 pounds in weight, yet is so agile that it can jump out of the water, right over a boat, and up on to a floe the edge of which is as much as six feet from the surface. The male bladdernose when

aroused is a ferocious animal, and frequently it capsizes the kayaks of Eskimo hunters in which it bites a hole, causing them to founder. It has received its name from the enormous furry bladder, situated on the nose, which it can distend to great size, and it usually does so when it is provoked or must defend itself. This seal does not keep to the banks, but is to be found far out at sea. It is fond of sunshine, and takes to the water in rainy weather.

The great enemy of all the seals in that region is the white whale, or grampus, which has no fear of anything.

It will attack the largest whales, tearing great pieces of blubber out of their sides with its formidable teeth and so maltreating them that often they die in consequence. "It is the terror of the seals. No sooner do the latter perceive their mortal enemy than they make a hasty escape on to an ice-floe, or land; but the grampus is not so easily daunted. If the edge of the ice, or land, is not very high, it simply flings up its tail and sweeps the seal into the sea, where it is done for in the twinkling of an eye."

Land-Animals

Turning now to the land-animals, let us first speak of the beasts of prey, of which the list is short, including in the far region north of Lancaster and Barrow straits, of which we are now speaking, only the polar or white ice-bear, the wolf, the arctic fox, the ermine weasel and possibly the wolverene.

The bear is monarch of the frozen land, his kingdom covering the whole region within the arctic circle, and here and there, as between Hudson Bay and the Atlantic, reaching south of it. Formerly it ranged south to Newfoundland; but now none are to be seen south of northern Labrador. Its power to endure cold is remarkable in a land-animal, no degree of frost recorded seeming sufficient to abate its activity; and it does not hesitate to plunge into the sea and disport itself regardless of either the floating ice or an air chilled to many degrees below zero. Its fur is not noticeably longer than that of other bears, but the under-fur, growing among the roots of the outer coat, is

impervious to water and retains the heat of its body; and the soles of its feet are hairy, aiding it in swimming and giving it a firmer hold upon the ice as well as protecting the feet against cold.

The size of this bear is usually overestimated, for many of the great lengths recorded result from the measurement of stretched skins. Hornaday tells us that the largest specimen in the New York Zoölogical Park (up to 1904) was 7 feet 2 inches in length and weighed, alive, about 800 pounds; when standing erect upon its hind feet its nose reached 8 feet 8 inches from the ground. The height of such a bear is 50 inches at the fore shoulder, showing that its legs are longer in proportion than in other kinds of bears. Undoubtedly occasional specimens exceed these figures. The coat is yellowish white all the year round, with the claws and spaces about the muzzle black.

These bears move rapidly, easily outrunning a man, and when lean, giving dogs a hard chase to overtake them. They swim and dive well in water, and show great agility in climbing about steep rocks or ice-masses, or in getting out of the water upon floes; and they pounce upon seals and snatch at porpoises and moving fish with amazing quickness, considering their bulk. In temperament they are timid rather than ferocious, as a rule, and are not especially dangerous as game, yet when brought to bay fight with sturdy courage; and every arctic explorer relates tales of the self-sacrificing devotion the mother shows in defence of her cubs, and of the intelligent anxiety she displays in keeping them behind her when danger threatens. At night, however, the polar bear is often far more ready to attack a man than in the daytime, presumably because of its own greater sense of danger in the night.

Hunting-Grounds

"His favorite hunting-grounds," say the authors of "American Animals," "are along the margin of the ice-fields, where the drifting floes grind against the fixed ice of the shore-line, and rend and split with the heaving of the ocean. Here he

Copyright by Underwood and Underwood.

ESKIMO CHILDREN.

Photo. Underwood and Underwood.

POLAR BEARS ON THE "ERIK."

watches for seals as patiently as a cat watches for mice, or stalks them under cover of the ice-cakes at the edge of the breakers." Dr. Kane relates that on occasion, when in dire need, he saw a large seal basking upon the ice: "Taking off my shoes," he writes, "I commenced a somewhat refrigerating process of stalking, lying upon my belly, and crawling along, step by step, behind the little knobs of floe. At last, when I was within long rifle-shot, the animal gave a sluggish roll to one side, and suddenly lifted his head. The movement was evidently independent of me, for he strained his neck in nearly the opposite direction. Then, for the first time, I found that I had a rival seal-hunter in a large bear, who was on his belly like myself, waiting with commendable patience and cold feet for a chance of nearer approach."

If he sees a seal resting on the ice where there is small chance of creeping on it undetected, the bear will plunge into the sea and swim far out to leeward, then approach mostly under water. He is a powerful swimmer, even in a heavy sea, and has been met with in open water miles from land.

In the spring these bears range the sea-margins and feed upon any dead animal thrown up, or fishes, crabs, etc., left in the pools by the retreat of the tide. They search for the eggs and young of birds, devour young seals, and the calves of musk-ox, reindeer and the like, pounce on, or scratch out, young hares and lemmings, and so grow fat. In summer much grass and herbage is eaten, and berries, willow-bark, roots and lichens, are added to the fare, so that the approach of winter finds them with stores of fat, all of which will be needed during the long winter; and many of the bears killed in the latter part of that season are mere skin and bone.

Although these bears are likely to be found anywhere, even to the extremest northern verge of the land and the land ice, they vary greatly in abundance, often being absent one winter from islands and districts where they have previously been numerous and will be again. They seem especially plentiful on Spitzbergen, whence most of the skins brought to market as rugs, etc., are derived.

It used to be stated that most of these bears, and, at any

rate, all the females, migrated from the far north to somewhat warmer latitudes in winter; and also that during the middle of that inclement season all went into hibernation, when the young were born. This does not, however, seem to be an invariable custom, although it is certainly true that fewer of the animals are seen in December, January, and February than at other times.

"In the autumn, when the snow-storms become heavy and frequent, and the driving scud from the sea shuts out the low sun, most of the she bears look round for some protected hollow in which to pass the winter. . . Sometimes one will dig a cave for herself in a snowdrift, or, curling up in the bed of a rock, she lets the snow bury her as it will, the one object in any case being to have plenty of snow piled above her for protection against the coming winter. . . The young polar bears are born soon after the old one has buried herself for the winter, and for months she hibernates there under the snow, with only a slender breathing-shaft kept open by the warmth that rises from her fat body."

By autumn the mother has recovered from her exhaustion, and her two cubs are become stout and playful, when she takes evident pleasure in their company. Her rough play is their training: ducking them in the lanes, sliding down the icebergs in well-worn places—a sport, for it can be regarded as nothing else, of which these bears, old and young, are very fond—"tumbling, rolling, growling, and pretending to fight with them; and the little ones throw themselves into the game with all their hearts; while the hoarfrost and glittering sunshine on the hummocks and snow-fields give the scene a marvelous purity and freshness."

Observations of Sverdrup

Some of the best information as to the habits of white bears, with many thrilling stories of encounters with them, are to be found in "New Land," the narrative by Otto Sverdrup of the Norwegian Expedition of 1898-1902.

It was in spring that the bears appeared—often several

would be seen in a day; and they seemed quite unacquainted with man and his weapons, frequently visiting camps and storehouses with a boldness which could only mean total ignorance. For example: "On Sunday, April 21, another bear came running out towards us from the ice-foot. He looked ready to burst with curiosity to know what we were, but that he can hardly have found out. He peered and stared, and turned and twisted till I felt quite sorry for him, and felt as if I ought to offer him my glasses, for his eyes seemed to be almost dropping out of his head. When he could do no more he set off southeastward, but struck out so far from land that he fell on to our tracks, where he picked up the scent and followed us for an hour or more, though always at a respectful distance."

On another occasion:

"Early in the morning, just after we had finished breakfast, the dogs gave tongue. Schei plunged out of the tent, and I followed at his heels, but we had hardly got outside before the dogs wrested themselves loose and set off after a bear. Their traces had already become inextricably entangled during the course of the night, and when they now set off, with the connecting lanyard holding all the traces together, confusion became worse confounded. Away across loose snow and every obstacle, as hard as they could go, but always with a couple of yelping, sprawling duffers in tow, who made the snow fly up like dust. As for the bear, they had hold of it several times, but could not bring it to bay. I was only thankful the fellow did not take it into its head to make an end of them on the spot, for it could easily have done so had it liked. And thus the whole medley made their way towards land!"

An Exciting Adventure

One more adventure is worth giving as an example of what a factor the bears are in the life of a resident on arctic islands. One night late in the fall (September 30, 1902), Bay, the naturalist of the "Fram" expedition, was alone in a tent on the shore of Jones Sound, guarding a store of walrus-meat, and next day had a tale to tell which shows that guarding was necessary.

"On September 30 I lay reading till late in the evening, and, when eventually I put out the light, I remained awake for some time. Just as I was falling asleep, I was suddenly aroused—without any kind of preparation—by a series of frightful howls from 'Susamel.' I have often heard dogs howl from pain or fear, but such terror as this expressed I had never heard before. At the same time I heard a wild turmoil going on at the place where the dog was tied up. 'Susamel,' apparently, was rushing round and round the length of her chain, followed by some animal with much heavier steps. That something was going on was very evident, and I therefore made all the haste I could to light the lamp and get out of the bag. But the bag was very narrow, and it was therefore some time before I was clear of it; during this performance I overturned the lamp, which at once went out, but I would not stop to light it again.

"Outside the howls continued, and the dog and its enemy, whatever it might be, ran round and round till I could hear the pebbles scattering far and wide. But then I heard that the dog had got loose, and was running as hard as it could go, still howling and with the chain dragging behind it, in a northerly direction, towards the lowest part of the point. In this way 'Susamel'—called later the 'Heroine of Ytre Eide'—left the seat of war, and left me to pull the chestnuts out of the fire as best I might.

"Meanwhile, I had got out of the sleeping-bag, and seized my gun, which was lying ready loaded beside me. I then managed—still in the dark—to unhook a couple of hooks in the tent-door so that I could see out. Being cloudy weather, it was very dark, and I could only see the meat-stack in a confused mass. I could just distinguish the outlines of a bear, which was standing by it, with its head down, but without eating, as if it were listening. I very cautiously stuck the barrel of the gun out of the tent-door. It was much too dark to aim, but as I knew the gun well, I pointed it towards the bear as accurately as I could, and fired. The only thing that came off, however, was a click, as the cock caught in the tent-door. Then, with the greatest care, I got the door right open, and crept out, which I could do unnoticed, as the sail of the boat ran a good

way forward in front of the tent, and made the entrance to it still darker than the surroundings. But when I had come half-way out of the tent, one of the hooks caught in my Icelandic jersey, which was the garment I was wearing uppermost. In becoming aware of this, I touched a tin box inside the tent with my foot, so that it gave a slight rattle. No sooner was this sound audible than the bear—to my great and unpleasant surprise—came trotting smartly up towards me.

"Here was manifestly no time to be lost. When my assailant was about fifteen feet away and still advancing quickly, I blazed at it, lying on my face, and without being able to take proper aim. The flash from the gun shed a brief light on the scene, but a moment afterwards made one only the more sensible of the darkness.

"That I had hit the bear was plain enough, for it rose on to its hind legs, whined from fury and pain, sparred with its fore legs, and spun round like a top. It was the most remarkable, I might almost say the most insane sight I had ever seen. At the same moment I observed two very small cubs which appeared from the meat-heap and stood side by side, amazed spectators of the scene which followed.

"Well, the bear spun round and round, but by degrees the whining ceased, and it ran round in an ever-increasing circle: it was quite evident that it was seeking the reason for the pain it was feeling. Whether it saw me when I fired I do not know; but, anyhow, it must have been dazed by the shot, and the deep gloom under the sail prevented it from seeing me later.

"I had not been able to put a new cartridge into the rifle-barrel, but the shot barrel was loaded with ball, which I knew would have its effect at close range. I was afraid, however, that I might shoot wide, now that the bear was in such a state of activity; in that case I should be disarmed, and the shot would be nothing but an indication of where I was. I therefore lay quite still, with my finger on the trigger, ready to use my last shot at the extreme moment, when the bear should be on top of me.

"And that this was what would happen I had not the slightest doubt, for in one of its rounds it came close up on my left side, and was then about eight feet away. It turned straight towards

me, and I had not even time to bring the barrel of my gun over in its direction. But happily it met one of the guy-ropes, and this slight hindrance it evidently would not overstep, for it again changed its direction and ran down to the meat-stack.

"This was its last circular tour, for my shot seemed suddenly to have an effect. Followed by its young ones, and leaving behind it a broad stripe of blood, it now rushed down across the ice-foot, which was quite under water from the spring tides, and went to sea, swimming southwards."

The morning light showed evidences of the scrimmage, and that a great deal of blood had been shed; and later a dead bear was found some distance away. As for the dog, she ran several miles to the ship before stopping.

Wolves and Arctic Dogs

Next to the white bear the wolf is the most formidable carnivorous animal of the northern solitudes. This is the big gray wolf, and it also has a circumpolar range, and advances to the margin of the Arctic Ocean. They constantly visited the "Fram" in her winter quarters in Jones Sound, sometimes in midwinter, when the thermometer showed 60° below zero. Emboldened by hunger they came right up to the refuse heap, and many a fight took place with the dogs.

Although in all their four years none of Sverdrup's dogs fraternized with their wild cousins, those of the Eskimo generally constantly do, and the stock is recruited with the resulting hybrids. Sir Edward Parry, when wintering a few miles southward in 1820, had a different experience:

"About this time [January, 1820] a white setter dog had left the 'Griper' for several nights past at the same time, and had regularly returned after several hours' absence. As the daylight returned we had opportunities of seeing him in company with a she wolf with whom he kept up an almost daily intercourse for several weeks, till at length he returned no more to the ships. . . . Some time after, a large dog of mine, which was also getting into the habit of occasionally remaining away for some time, returned on board a great deal lacerated

and covered with blood, having no doubt maintained a severe encounter with a male wolf, whom we traced to a considerable distance by the tracks on the snow. An old dog, of the Newfoundland breed, that we had on board the 'Hecla,' was also in the habit of remaining out with the wolves for a day or two together; and we frequently watched them keeping company on the most friendly terms."

These arctic wolves are hardly less easy to trap or catch with baited hooks, or any other device, than their sophisticated brethren of civilized districts; but Sverdrup's men did at last capture a pair (young male and female) in a big box trap. They were confined in a cage on deck, and soon became reconciled to their position. After a while a fox was captured, and put in with the wolves, although the general opinion was that this was equivalent to killing him, for the fox is a part of the wolf's regular prey; but to the astonishment of every one the fox snapped and snarled and bullied the wolves into complete subjection. In early spring these wolves were let out, and tied up on deck, where they played with each other all day long, and when they had a chance with those on board as well. A game with one or other of the crew, in particular, was mutually appreciated; but it was impossible to fatten them. The fox, on the other hand, was so bad-tempered that nothing could be done with him; he showed his teeth and snarled if anybody went near him.

During a trip Sverdrup and Schei made to Nansen Sound, wolves annoyed them constantly, and once killed one of the dogs. They describe how once they witnessed an attack of a pack upon a band of musk-oxen:

"On arriving at the camp we had noticed two polar herds up a little valley. They appeared to consist of four cows, each with a calf. The seven unwounded wolves, having to leave us with stomachs as empty as when they came, now went inland, taking a line northwards towards the plains, and came across these animals. The meeting was evidently quite unexpected on both sides, for the air was so still that they could hardly have got wind of each other, and we could see that the wolves actually started when they caught sight of the oxen.

They stopped short, and stood still a while, probably making out their plan of attack. Finally they formed a ring around the nearer of the animals, but not one of them would approach closer than two or three hundred yards. There they took up their stand, and as long as we were about—and that was for several hours—they kept at their music without let or hindrance. Such music, too! A long-drawn, weird howling, as if a knife were being driven into them every time they uttered the sound.

"We were most curious to see what would happen. We thought that the four cows with their small calves must be a splendid opportunity for the wolves, but the cows did not seem to be at all impressed by them; and, as a matter of fact, were so indifferent that they did not even take the trouble to get up. When later on the wolves appeared to think of approaching the other herd, which was somewhat scattered, the animals drew nearer together, but did not form a square. It would appear from this scene that the polar ox stands in no great awe of the wolf; at all events, when it does not appear in greater numbers than on this occasion. On the other hand, it would seem as if the wolf has a good deal of respect for the oxen."

White foxes are numerous everywhere and in summer have no lack of food, but what they find to eat in winter is a mystery, and nearly every one examined at that season is lean and empty. The same may be said of the ermines, which, however, are far less often seen.

Reindeer, Hares, Birds, and Fish

Of the herbivorous land-animals the most important in Arctic America is the musk-ox, or polar ox, which is treated of elsewhere. It is preëminently the noblest game of the far North. The calves are born probably about the end of April, and this is undoubtedly the time when the wolf is most dangerous to these animals. Their food consists all the year round of grass and other herbage, which they scrape from under the comparatively thin sheet of snow.

The other ruminant of the polar regions, the reindeer, is not nearly so common north of the mainland as the musk-ox,

From a Drawing by George T. Tobin

ESQUIMAU BOYS

but single animals, or small herds, are met with even to Cape Columbia; and in northern Greenland occurs a variety, discovered by Peary, which is white the year round. It is without doubt on account of the wolf, which with its great staying power tires it out and at last overtakes it, that the reindeer is not found in greater numbers.

Wheresoever the large valleys open out into the fjords, and where the vegetation is rather more plentiful, there the handsome white arctic hare is certain to be found, often in large flocks. Its behavior varies much; as sometimes it will allow one to approach quite near to it, while at others it is a matter of difficulty even to come within reasonable rifle-range. Its movements are very remarkable, as it habitually rises upon its hind legs and covers long distances on them, sometimes hopping and sometimes running.

The other rodent of these lands, the lemming, is more retiring. It exists numerously on all the islands, but as it is eagerly pursued by both beasts and birds of prey it ventures out of its burrows no more than necessary.

Of the birds, the gerfalcon, snowy owl, and raven (which alone among them retains its sable coat the year round) represent land-birds of prey, while skuas terrorize the waterfowl. Ptarmigans breed everywhere, but migrate southward in midwinter. The only singing bird is the snow-bunting, whose sprightly song in summer is mentioned by every traveler as one of the delights of the season.

The sea-fowl are more numerous than the land-birds, both as regards species and individuals. It is they which bring life and turmoil to these barren coasts; their scream it is which fills the air, their presence which brings summer with it. Most conspicuous, perhaps, are the gulls, of which there are several species, breeding on the cliffs and rocky shores, the most numerous and finest being the glaucous gull. The screaming of the arctic terns is heard everywhere. Among the first birds to arrive from the south are the barnacle-geese, whose nests are made on islets in the sea or rivers, and also on the great plains. This and the eider-ducks (of two kinds) are to be seen everywhere on these coasts as soon as there are splits in the ice

in the spring. The food of the latter consists mainly of the prickly and little attractive sea-urchin. The nests of both are sometimes found singly, scattered about the shore, sometimes on islets in the rivers and sometimes on the small islands. The eiders remain in the autumn as long as there is the smallest amount of open water. The long-tailed duck, or old squaw, is also numerous, resting near fresh-water lakes. An occasional redthroated loon is taken; and some shore-birds, such as the turnstone and knot. The eggs of the latter, not hitherto known, was one of the prizes brought back by Peary in 1909.

Of cliff-building sea-birds there are three kinds of auks and guillemots, of which the black guillemot is most in evidence, and often to be seen in myriads at favorable nesting-haunts. It nests in many places amidst old heaps of stones, and is an important provider of food on summer boating excursions. Mention must be made of one more bird, namely, the fulmar, or mollymoke, the bird of the fog and drifting ice, which occurs everywhere, and sometimes is seen very early in the spring.

Fish are scarce in the far North, though a straggling salmon now and then reaches Jones Sound; but insect life is more abundant than any one would suppose who had not studied the matter.

Photo. Copyright by Underwood and Underwood.

LITTLE AUKS ON THE GREENLAND COAST.

LANDING EQUIPMENTS AT CAPE SABINE.

MISCELLANEOUS

The Musk-Ox and its Habits

MUCH has been heard, ever since exploration in high latitudes began, of the musk-ox, a large animal which inhabits those solitudes between Greenland and the Mackenzie River. To its presence is due very largely the existence of native races of men there, and without the food it has furnished many an explorer must have perished, and the geography of extensive regions have remained little known.

This animal, however, is not a true ox, but forms a type by itself, more nearly related to the white goat-antelope of the northern Rocky Mountains than to any other American quadruped, and still more closely to the takins (*Budorcas*) of Tibet and western China. Its scientific name is *Ovibos moschatus*, and there appears to be only a single species, although those of Greenland differ somewhat from those of the mainland. Mr. Ingersoll tells us, in his "Life of Mammals," that this animal is arctic in the strictest sense of the word, for Peary found them upon the northernmost shores of Grant Land and Greenland, and none wander even in midwinter farther south than the arctic circle. "They are not found west of Cape Bathhurst," he says, "nor east of Fox Channel and Baffin Bay, nor on the west coast of Greenland, although frequenting the east coast south to about lat. 70° N. None now occurs anywhere in the Old World, but in Pleistocene times these animals inhabited Asia and Europe down to the east-and-west mountain axis, and were hunted by the men of the early Stone Age; and at a somewhat earlier time musk-oxen, of extinct genera as well as species, roamed over this continent, as far south as Kansas."

These singular animals have little resemblance to other

ruminants except in the bison-like head. "In it," remarks Wm. T. Hornaday, author of the "American Natural History," "one sees an oblong mass of very long and wavy brown hair, 4 1-2 feet high by 6 1-2 feet long, supported upon very short and post-like legs that are half hidden by the sweeping pelage of the body. The three-inch tail is so very small and short it is quite invisible. There is a blunt and hairy muzzle, round and shining eyes, but the ears are almost invisible. The whole top of the head is covered by a pair of horns enormously flattened at the base, and meeting each other in the center line of the forehead. . . The outer hair is a foot or more in length, and often touches the snow when the animal walks. In the middle of the back is a broad 'saddle-mark' of shorter, dull gray hair. Next to the body is a woolly coat of very fine, soft, light-brown hair, very clean, and so dense that neither cold nor moisture can penetrate it. This is for warmth. The longer and coarser hair that grows through it is the storm-coat to shed rain and snow."

The average live weight is about 500 pounds, but some are much heavier. They are so very ox-like in appearance and behavior, that some of the later men have spoken of them as "polar oxen," thinking it a better name than musk-oxen, especially as all agree that there is neither odor nor taste of musk about them; yet Nathorst, who has written extensively of them, as encountered in northeastern Greenland, declares that he could smell a herd at a long distance.

Probably the fullest information extant of these animals and their habits, as learned by years of hunting them, even to the shores of the Arctic Ocean, is contained in the "New Land," by Otto Sverdrup, from which the succeeding material has been gathered. The region covered was Ellesmere Land and the islands west of it.

Agility and Curiosity

The musk-oxen, or polar oxen, as Sverdrup terms them, were first encountered, however, down near Hayes Sound, where in some places broad paths showed the frequency of their tramping through certain valleys. Single bulls and small

bands were met with in a rocky district, where they would hasten with amazing agility to some high point and take a stand, facing the hunter, instead of running away, except when they became alarmed a long distance off. Sverdrup shot a cow in one such group, when the rest of the herd, instead of fleeing, "began to bellow and behave just as the cattle do at home when they smell blood. They walked round and round in a ring with lowered heads, pawed up the earth so that the moss flew in all directions, lowed and snorted, and altogether behaved in a most alarming manner."

This attitude develops sometimes into real danger for the hunter, as occurred to Dr. Bay in one of his hunts:

"Suddenly one of the oxen caught sight of him, and came stealthily snuffing down to examine this curious phenomenon. Bay took steady aim, and let blaze. He hit his mark of course, but the ox was not to be daunted by such a trifle, and continued its way, with the difference only that it increased its pace, and set a course straight on Bay. . . To the onlookers things seemed to be getting pretty serious. Nearer and nearer came the ox, at a steady pace, and Bay apparently fired into it time after time. Not a shot seemed to take effect, and he had to confess later that he had found his match. It was not till the animal was within a few paces of the stone that at last it received a shot which brought it to the ground."

Furious Charging on Enemies

Others found themselves in peril from similar charges, as the next citation will show:

"As we were wending our way up the slopes," Sverdrup writes, "we suddenly became aware of three polar oxen high up in a steep, rocky place. . . My first bullet I heard singing among the rocks over the heads of the animals; my two next struck one each, and although the oxen remained on their feet, I could see that they had had enough. A large ox was still standing a little distance off, so I let go the dogs on to it, and left Simmons and Schei to do the rest. It was their first experience of polar-ox shooting. They followed the animal a little way

along the flat-topped ridge of sand, and then Schei dropped down behind a stone, from which he meant to get a resting shot. Simmons was just standing wondering whether he should do likewise, but before he could make up his mind, the ox set off full gallop down the slope, the stones and earth flying from under its hoofs. It headed straight for the discomfited sportsmen, with all the pack after it, and so extraordinarily quick was the animal, that not one of the dogs could keep up with it.

"It could not have been pleasant to be Simmons or Schei at that moment. It was difficult for either of them to shoot, for if they missed they might hit a dog; and in any case to shoot resting was an impossibility. This Schei also perceived, and he started up to aim; but the ox advanced on him so rapidly that he was not ready for it in time. The same was the case with Simmons—he had got a cartridge jammed—and now there was only one thing left for them to do—run to one side to avoid being tossed by the animal.

"I had my own reflections on the subject as I stood looking on at the performance, but they were of short duration. At the mad pace at which the ox was going it was impossible for it to remain up under the boulders, and so down it came, heading straight for me. Here was a dilemma! Behind the ox were both the shooters and the dogs, and if I missed, one or other of them might be killed. There was no time for hesitation, however, so I sent the ox a bullet at twenty yards' distance, but without it having the slightest effect. It rushed straight on me with the same furious speed as before, and there was absolutely no possibility of getting in a new cartridge. I had to do as my comrades had done before me. The animal flashed past, but my second shot being ready just as it was turning round, I gave it a charge which hit it on the nape, at the back of the head. It fell on the spot. It was a fine animal, with the biggest horns I had seen up to that time; and it was quite capable of using them too."

Habits in Ellesmere Land

As experience was gained where this game was more abundant, their habits were thoroughly learned. All the islands north of

the American continent and the plains between the Arctic Ocean and Hudson Bay bear a great quantity of herbage, while the rocks support edible lichens in abundance in most places. In summer, then, these animals, reindeer and other kinds of game, thrive; and in winter they resort from the colder, snowier and more barren districts, to valleys which afford them shelter, and on whose intervening ridges the wind keeps the surface bare of snow, enabling them to feed sufficiently to maintain life, and often to keep in excellent condition, until spring.

One April, in Ellesmere Land, a party of the Norwegians witnessed an exhibition of the tactics of defence adopted by these oxen. Mr. Bay had started four fine examples and Sverdrup's team got wind of the chase, and set off at such a pace that the Captain only just managed to throw himself on the sledge in time.

"They tore like wildfire," as he expresses it, "across the level ground, the loads jumped from drift to drift, and before I knew what had happened the sledge had dashed against an icy drift and was overturned; while I found myself at some distance from it sitting in the snow. I struggled on to my legs again as quickly as I could, and flung myself on to the next sledge as it flew past, and on we went again at mad speed until at last the dogs came to a standstill in a heap of sand on the north side of the valley. . . Meanwhile the dogs had winded the oxen, and when they came to a standstill I undid the connecting lanyard, and let them head up the slope, followed by Bay, who scrambled after them, literally streaming with perspiration, the result of his efforts in the chase.

Forming Defensive Squares

"I took my gun, and sauntered after them—I liked looking on at that sort of sport. When I reached the first slope, I observed that the four oxen had formed a square, and were standing in wait for the dogs which were making towards them. It was evidently their intention to give battle, and when the dogs came up, a curious scene ensued.

"The oxen, as I said before, had formed a square. They stood at regular intervals one from another, with their hind

quarters together, and their heads outwards. Then in turn, and with lightning speed, each one made an advance in the shape of a circular movement from left to right. At the same moment that an ox regained his place, his neighbor on the right sped out on a similar attack, and thus they went on uninterruptedly with almost military precision. As long as the maneuver continued, one of the oxen was always out on a movement of attack, endeavoring to spit or rip up one or more of his adversaries.

"The size of the attacking circle seems always to be determined by the distance of the enemy and the nature of the ground. As a rule, the animals advance ten or twelve yards from the square, and once I saw them make attacks to a distance of a hundred yards. The remaining oxen always cover the gap, in the square, but immediately make room for their comrade when he returns from his round. Now and then, when the fight is a long one, they stop to breathe, and then begin again with renewed vigor. The greatest degree of precision is attained by oxen of the same age. Like old combatants, they seem thoroughly to enjoy defending themselves, and appreciate the sporting element in it.

"I have seen herds of as many as thirty animals form a square, with the calves and heifers in the middle, and the bulls and cows standing in line of defence at distances as equal as the points on the face of a compass. When the defence forces of the line were no longer available, the reserve was mobilized; right down to two-year-old heifers. In such circumstances, of course, the movements were not carried out so regularly, and the discipline was less absolute. I noticed that sometimes the regular old fighters of the herd formed themselves into a kind of outpost, at twenty or twenty-five yards' distance from the square. This was partly with a view to defence, to take the first brush with the enemy, but also, no doubt, to have a good fight on their own account. It sometimes happened that the whole herd first formed in a square, and that then one or two fighting giants would walk out to the outposts' line; but, as a rule, their order of attack was evidently planned from the first. When once the animals had formed into a square, they

remained at their posts until the attack was repulsed, or the entire square fallen. I have myself seen the last-standing ox make his sortie and then return to his fallen comrades. In cases where the oxen had to defend themselves against a single enemy they would sometimes form up in a long fighting-line, without cover on the flanks, and then stood forehead to forehead, and horns to horns. They sharpen their horns by whetting them on the ground.

Value and Origin of these Tactics

"Their mode of defence is, on the whole, absolutely equal to the attack of any brute assailants existing in these regions, whether they be bears or wolves. One asks oneself involuntarily what animal can have developed their strategic reasoning powers in such an admirable manner. The polar bear it cannot be, for it does not appear in numbers together; its habitat is the drift-ice rather than the land; and besides, it is my opinion that a polar ox would make short work of a polar bear. The ox is so quick in its movements, has such enormous strength of neck, and is provided with such formidable, pointed horns, that, as far as a bear is concerned, it has no cause for alarm.

"What other enemy, then, has it to fear in these tracts? The wolf? Yes—that is indeed the only one; but in these parts the wolf does not appear in large packs. As a rule, they go about singly or in couples (the greatest number I ever saw together was twelve), and they live chiefly on the innocent arctic hares in which the country abounds. Other enemy in the brute kingdom the polar ox has not, in the arctic tracts where it now is to be found. Either it must have migrated hither from regions where it had more dangerous enemies, or else the wolf in earlier times must have appeared in such large packs that collective defence was a necessity. I incline to the latter view."

An instance of their method of fighting a single enemy by charging in a line, as mentioned above, nearly cost Baumann his life. He tells the story as follows:

"As aforesaid, the animals suddenly became aware of me, and at the same moment wheeled right round and headed

straight for me at full gallop. So close on each other were their horns that they seemed to form a single, unbroken, white line. The animals sunk their heads till they almost touched the ground, the steam stood out from their nostrils, and they snorted, blew, and puffed like a steam-engine trying to set a too-heavy train in motion.

"A glance backward at once told me that there was no question of retreat; for that I was too far forward on the plateau, and should be overtaken long before I reached half-way to the cliff. There was nothing for it but to try and make a stand; to be carried with them would bring certain destruction. Up came my carbine, a report, a trembling of the ranks, and an animal fell; the others at once closed up, and so far from the attack diminishing in force and fury, it seemed rather to increase. To continue shooting and trying to defend myself with the carbine would have been downright madness. I had only two shots left; and one need not have had much to do with polar oxen to know that one must be exceptionally lucky to bring two animals to the ground with two shots when the herd is advancing at full gallop. And even were I lucky enough to bring off two such master shots, it would hardly effect the herd to any appreciable extent.

A Hunter's Peril

"Well, there was no time for prayer or reflection; if this was to be the end, then, in Heaven's name, let me rush into it instead of standing still, for by doing this I should, without doubt, only be carried with the oxen. I would not give much for what is left of a person when a herd of these animals has done with him. No, either there should be an end at once, or the polar oxen should let me through; so, with a horrible yell, and waving my arms all I knew, I charged the line. This manifestly did some good, for, as I came nearer, I saw the rank open, and I ran straight through it. The nearest animals were certainly not a yard from me. I was thus saved from the first shock, but I was still up on the plateau, and this was no abiding place for me. No; better make my way back to the cliff, and try to

get across the bed of the stream again. But before I had time to think which was the shortest way, I had the whole herd, which had wheeled round, in line coming towards me again. I had succeeded in impressing them once, so I supposed I could do it again, and, with my former war-cry, I once more charged the line. As before, the ranks opened, and I slipped through unscathed. In the rush of it all I had managed to make out that the shortest way to the cliff was the way I was going, and I continued to run on.

"Again the oxen wheeled round; this time, however, they did not come in line, but in herds of five or six, and, what was worse, they now appeared as if they meant to attack from different sides. I suddenly realized that, once surrounded by these small herds, I was undone. I exerted myself to the utmost, and ran as hard as I could; but nearer and nearer came the herds, and I thought I was already cut off, when help came from a quarter whence I had long expected it. Up the cliff-side came 'Moses,' tearing like the wind, and rushed straight on to the nearest herd. Over he went, poor dog, and I heard a plaintive yelp; but order was broken, and the herd dispersed. I thought, of course, that there was an end of 'Moses,' but he emerged from the *mêlée* whole and unhurt, and went for the next herd. Now came 'Gulen' and 'Silla,' and, Heaven be praised, not together, but a little way from each other, and each attacked a herd.

"In this manner I gained sufficient breathing-time to reach the cliff, where I was in comparative safety, so I stopped and turned round to see how the dogs were faring. The herds swept on, crossing and recrossing one another, blowing and tearing up the earth with their horns. Now and then I heard a plaintive howl from one or other of the dogs; it was simply a miracle that they were not spitted at once on one of the many horns which were ready to rip them up. I called the dogs, but none of them heard me. I had no mind to venture out on to the plateau again, so I crossed over the bed of the stream, and began to call the dogs once more. But it was fruitless; my voice was drowned by the tumult of battle on the other side.

"Had I had ammunition enough, I could, of course, have

tried to shoot down the herd at long range, but in these latitudes it is downright malevolent, if not criminal, to shoot anything but what one is obliged to shoot, or what one can make use of. Wolves, foxes, and stoats, however, I except from this rule; bears, on the other hand, are so important as food for one's dogs that they ought to be allowed to go scot free if one has no use for them, or if one cannot take back the skin on board."

Every day, and sometimes several times a day in favorable parts of the country, polar oxen were met; and a curious circumstance is that in an extraordinary number of cases there were just eleven animals in a band. No more were shot than necessary, however; and with one more interesting incident we may leave them.

A Touching Incident

Sverdrup and Fosheim were hunting on snow-shoes (skis) in the far northwest of Ellesmere Land, when a small herd—all cows—were suddenly startled out of a hollow in the plain.

"As they started to run away I noticed that one of them had a newly born calf. The herd went up a steep snowdrift, eight or ten feet in height, and the calf made a brave attempt to follow, but when it had almost reached the top, lost its footing and rolled down to the bottom again. It fell so badly and helplessly that I thought it was killed, but to my surprise it rose to its feet and began to scramble up once more. Its second attempt to scale the drift was no more successful than the first, and again it came rolling down. It cried piteously, just like a baby when it is very unhappy. I felt so sorry for it that I was just starting to help it up the drift when suddenly it occurred to me that the old cow might misinterpret my motives, and what then? I might risk a battle with her, and it would be a pity perhaps to have to shoot her in self-defence. I decided to remain where I was, and await the turn of events.

"At last the mother heard the cries of distress, and came tearing down the hillside, the snow flying behind her. Heaven help the person who had meddled with her calf then! She would have made it hot for him. It was both amusing and

touching to see the two together. The mother caressed the calf as if to comfort it, sniffed it all over to see if it was still whole, gave it a push now and again, and then started gently up the drift; but not the way the calf had gone in following the herd; she carefully chose an easier and less steep way.

"When she had got it across the drift she ran a few steps forward, not very fast, but too quickly, at any rate, for the calf to follow her. Then she turned back and pushed it from behind with her muzzle, so that it went a little faster. Again she ran a few yards forward, but still the poor little thing could not keep up with her, and she returned to her old pushing methods. So they went on all the way up until they reached the square. Then she took her place in it, and the calf crept under her, and was entirely hidden from sight by her long hair."

MISCELLANEOUS

Stories of Eskimo Dogs

THE one essential of life and travel in the arctic regions, for the natives as well as their exploring visitors is the dog, which draws the sledge and aids in the hunting. Dogs vary much in different parts of wide regions surrounding the Arctic Ocean, but everywhere present characteristics closely allied to the wolves from which they are undoubtedly descended, and with which, even now, they are frequently crossed. A huge volume might be filled with extracts from the works of travelers, and a few, relating to the dogs of the Greenland Eskimo, as seen by recent explorers, may be interesting.

"Far from the least interesting members of this arctic community," it is written in the narrative of Captain Pennsy, wintering in Wellington Channel in 1850, "were a kennel of Eskimo dogs that had been established in a snow hut near the ships. . . They were great favorites among the seamen, and flocked eagerly round the first person who emerged from the snow-covered ships in the morning. They were, nevertheless, of highly jealous temperament, for if one of them chanced to receive more notice than its companions, the lucky fellow was forthwith attacked by the rest of the pack. This so constantly occurred that some of the cunning young dogs became afraid of the men's caresses and ran away the moment any marked demonstrations of kindness were directed toward them.

Adaptation to Arctic Conditions

"In many points amusing instances of the adaptation of canine instincts to the necessities of arctic life were displayed. In fine sunny weather, the dogs satisfied their thirst by lapping the surface snow; but in colder seasons they burrowed some

distance down for their supply of frozen water. In extremely severe weather, they constantly coiled themselves closely up, and covered their noses with the shaggy fur of their tails. At these times, they never rose even to shake off the accumulating wreaths of falling snow; if their masters called them, they answered by turning their eyes, but without removing their natural respirators from their nostrils, and no demonstration, short of a determined kick, could make them shift their quarters; but, at other times, they lay stretched out at full length, and were on their legs in obedience to the first tone of a familiar voice.

"The Eskimo dog is to be described as resembling in form the shepherd's dog, rising to the height of the Newfoundland, but broad like the mastiff; having short pricked ears, a furry coat, and a bushy tail. In general they are observed to bear a strong resemblance to the wolf, and the opinion is even prevalent that the former exhibit only the latter in a tamed state; but the avidity with which the wolf devours his supposed brethren does not seem quite consistent with so close an affinity. Frequent beatings are necessary to train these dogs for acting as a regular team. But their greatest sufferings respect the want of food. Captain Parry saw one which ate a large piece of canvas, a cotton handkerchief, laid out to dry, and a piece of a linen shirt. When these animals are yoked in the sledge, a whip twenty feet long enforces obedience; while peculiar cries indicate the right or left, to turn, or to stop."

These characteristics are noted by all later travelers, but it is fair to say that the dogs have become somewhat modified by long association with masters who treat them well, and to whom they often show great fidelity and affection.

Friendly Relations Despite Pugnacity

"The dogs, yes! It is they," exclaims Sverdrup, "which give a polar expedition such as this its character: without them, we should go nowhere; without them the time would be dull indeed. They are quite capable of keeping one very much alive, and of providing plenty of music into the bargain. By

day they were chained to a long cable down the ice, and at night went, six and six, into their ice-kennels under the ship's side; but, both night and day, they kept up an infernal commotion with their barking and howling, marauding and stealing, fighting and killing, all according as opportunity offered. If by hook or by crook they could manage to get loose from their chain, or their kennel, off they would go like a flash of lightning, either to the meat-heap, to gnaw at whatever remains were there, or to an old walrus carcass, which they had scented out in the neighborhood of the ship, and which, by degrees, they quite hollowed out, so that it sounded like an empty barrel when we hit the skin with our ski-sticks. Better scavengers one could not desire. They threw themselves on to, and devoured, everything that was thrown over the ship's side, whether it was food or refuse. "Their food consisted of biscuit, stock-fish, and walrus-meat alternately; their drink was snow. They were very warm and comfortable in their kennels of ice, and the only thing to be careful about was to see that they had a ventilating-hole and pipe through the roof, to prevent them from becoming too warm and, consequently, moist from sweat, which would have killed them at once. They stand the cold in the most astonishing manner, and, for that matter, might well have been out of doors both night and day; but, in such a case, their provisions would have been more drawn on, as we should have had to feed them better.

"Each man has his own team, which he feeds, thrashes, and defends from the others. He looks after them when they are ill, and receives, in return, their entire and absolute devotion. But to eradicate the wild animal in them is altogether beyond human power. Onslaught and murder were frequent occurrences, and followed on each other so rapidly that it was generally impossible to prevent a catastrophe. One of the Norwegian elk-dogs, 'Fin,' a stubborn and pugnacious-animal was one day thus attacked by a team of the Eskimo dogs, and, in the course of two or three minutes, torn to pieces and eaten. When we arrived on the scene, there was nothing left of him but the tip of his tail! This is nothing but the simple truth; it is impossible to imagine any animal, on the whole, more

aggressive and enduring than the Eskimo dog. It is my belief that a team of these dogs—that is to say, eight or ten animals—could do for a polar bear. Their qualities as draught-animals I have already spoken of, while their staying power is something marvelous. When to this is added their great intelligence and affection for their master, it will easily be understood how important a factor they are in modern polar exploration."

Value as Hunting-Dogs

Sverdrup recounts many instances in which they attacked bears at great odds; and it was customary when, in traveling about Ellesmere Land and the adjacent islands, this or other desired game was sighted, to cast them loose and let them bring it to bay. So eager were they to do this that it was often difficult and sometimes impossible to detach them quickly enough, when, unless it was convenient to have them drag the sledges in that direction, the only way to hold them back was by upsetting the sled and its load. This eagerness often led to fights and comical *mêlées*. Thus once when Sverdrup and Fosheim were traveling together a bear was sighted, and an attempt made to turn the dogs loose, but there was a little delay, and the dogs, in their excitement, dragged the sledges close together, and then merged into a single pack, and of course fell to fighting and making a horrible disturbance—it was their very life. On such occasions kind words and persuasions are of no avail, and only a sound thrashing is of any use. After almost hopeless confusion the pack was disentangled, and Sverdrup drove Fosheim's team after him.

"It proved, however, that such haste had been unnecessary, for the dogs had kept the bear well at bay, and I had hardly started when it fell for Fosheim's rifle. We now turned it over on to the sledge, so as to drive it to the other sledges, at the spot where we thought of camping; but we had counted without my dogs. When they discovered that I was driving another team, their fury knew no bounds, and, mad with jealousy, they all fell at once on Fosheim's team. We separated them, but no sooner had I begun to drive again than we had a repetition of

the scene. There was nothing for it but to change teams, and when my own had been put to the sledge, they started off quite happily, and as if nothing had happened. They would not allow the others to be driven by their driver!"

This individuality and sense of propriety was quaintly exhibited on another occasion.

"These dogs are curious animals. At the making up of the teams, of two friends one only had been included in Bay's team. This the excluded one could not forget, and haunted the team, early and late. Now, a team will not stand any interference from outsiders, and the consequence was that the other five fought the unfortunate animal time after time; but to show them how amiable was his disposition, he merely turned over on his back, whined, and let them maul him as much at they liked without, as far as I saw, ever attempting to pay them back. It is one way of making one's self agreeable! Still, so much love deserved its reward, and eventually had it. He went on ingratiating himself with the others in this manner for such a long time, that at last he was acknowledged and taken as seventh man into the team."

Remembering these traits, one can imagine the excitement and amusement in the following accident, which was due to the fact that the party, with three sledges, were crossing hastily a region where the spaces between great rocks had been filled in with drifted snow, which in some places had been dug out by the whirling wind, leaving hidden pitfalls. It should also be mentioned that the dogs will permit no gaps between their own team and the sledge ahead if they can help it.

Eighteen Dogs in a Hole

"It once happened that just as we were passing a rock of this kind, a gap occurred between my sledge and the one following it. As soon as I became aware of this I pulled up; but almost before I knew what was taking place the dogs had made their usual frantic rush to catch up, and the sledge, men and team were precipitated into the hole, twelve feet below. A moment afterwards, before anything could be done to prevent it, the

next sledge came tearing up and fell into the hole, and on the heels of number two came a third, which followed their example.

"This was the worst thing which had yet happened to us on this perilous journey. Life and limb were at stake, and the fate of the expedition was at that moment, perhaps, decided. As quickly as could be I was on the spot to start the work of rescue, and it was not long before the others came up, expecting an abundant harvest of broken limbs and splintered sledges.

"In the grave lay pell-mell three men, eighteen dogs, and three sledges with their loads, and the snow was flying up from it in clouds. Here and there a sledge-runner, or a seal-skin strap, was sticking out. Then I saw one of the men crawling out of the medley and pulling himself together, then another, and another. Thank God, they were all alive! And the dogs? They were lying in a black heap, one team on top of the other, kicking, howling, and fighting, till we could hardly hear the men's voices for their noise, so, apparently, they too were alive. As soon as we had hauled them all up, we set to work to shovel part of the drift away so that we could drag up the loads. The first sledge, which, after much toil, we succeeded in bringing up, strange to say, was whole, nor was there anything wrong with number two, while number three was as intact as the two former. The very astonishing result of this flight through the air was, therefore, that not a limb, nor a lashing, nor bit of wood was broken."

Indomitable Courage and Tenacity

The tremendous eagerness with which the dogs would rush upon game—especially seals, musk-oxen and polar bears—has been mentioned. A single incident, of many which might be cited, will show the quality of their courage. Sverdrup and Schei were encamped one day in King Oscar Land, and went to rest in fine weather.

"About eleven o'clock the dogs woke us up with a start; they were yelping and making such a noise, that we knew that there must be something the matter. We ran out as quickly as we could, but the expected bear was nowhere to be descried.

But that there really had been something going on we understood at once, for the dogs' hackles were bristling and they were looking northwestward, pulling and jerking at their traces, and giving tongue as if it was a matter of life or death. We followed the direction they were looking in, and saw a bear, far out in the sound, trotting briskly southward. I ran to my team, and sent them off one by one as fast as I could unharness them, so that they might be loose and unhampered. 'Gammelgulen' was the first to go off the slip, the others followed quickly, and not many minutes afterwards they reached the bear, turned it, and came running inwards towards land.

"The bear was determined to go up a difficult stony valley a little north of our tent, and, try as the dogs would to prevent it, up the valley it went. Schei and I ran full speed northward along the ice-foot, and soon heard that the dogs had brought it to bay. We made a short cut across some hills of grit, and on reaching the top of one of them saw the bear on the other side of the valley, sitting on a high hilltop, which fell almost sheer away. But on the north side it was accessible, and here it was, probably, that the bear had climbed it. There sat the King of the Icefields, enthroned on a kind of pedestal, with the whole staff of yelping dogs standing at a respectful distance. I tried a couple of shots, but overrated the distance, and the bullets went over the bear's head. I then told Schei to go and shoot it while I looked on at the further development of the drama.

"The bear's position was a first-rate one. It had taken its stand on a little plateau high up on a mountain crag; this little ledge was reached by a bridge not more than a good yard in width, and there stood the bear, like Sven Dufva, ready with his sledge-hammer to fell the first being that should venture across.

"Meanwhile Schei was climbing and scrambling in the snow and stones without seeing the 'white 'un,' which was hidden from him by the ground. His Majesty was not visible until Schei came within a few feet of him, but then it was not long before a shot was heard. The bear sank together, and a few seconds afterwards all the dogs had thrown themselves on to it. It was very plain these fellows had not been surfeited with

bear-meat. They tugged and pulled at the bear's coat, tearing tufts of hair out of it, and before we knew what they were doing, had dragged the body to the edge of the plateau, where it shot over the precipice. The dogs stood amazed, gazing down into the depths where the bear was falling swiftly through the air—but not alone, for on it, as large as life, were two dogs, which had clung so fast to its hair, that they now stood planted head to head, and bit themselves still faster to it in order to keep their balance. I was breathless as I watched this unexpected journey through the air. The next moment the bear in its perpendicular fall would reach the projecting point of rock, and my poor dogs —it was a cruel revenge the bear was taking on them! I should now have only three dogs left in my team.

"The bear's body dashed violently against the rock, turned a somersault out from the mountain wall and fell still farther, until after falling a height of altogether at least a hundred feet, it reached the slopes by the river, and was shot by the impetus right across the river-ice and a good way up the other side. And the dogs? When the bear dashed against the mountain they sprang up like rubber balls, described a large curve, and with stiffened legs continued the journey on their own account, falling with a loud thud on to the hardly packed snow at the bottom of the valley. But they were on their legs again in a moment, and set off as fast as they could go across the river after the bear. Not many minutes afterwards, the whole pack came running up; but when they were driven away from the carcass they lay down again to await their turn. I hurried back to camp to fetch the dogs' harness; we put a connecting lanyard through the nose of the mighty fallen, and set off.

"The dogs knew well enough that this meant food for them, and the nearer we came to camp the harder they pulled. In fact, I had to sit on the carcass to keep them back, and, jolting backwards and forwards, on this new kind of conveyance I made my entrance into camp, in the light spring night. The bear was at once skinned, and the dogs had a meal. When they had finished, there was hardly any space between their ribs."

Mother-Love for Their Young

Even these fierce creatures, hardly removed from the wolves, between whom and themselves burns a quenchless enmity, have moments of tenderness, however, as the following incidents will show. During a particularly hard journey puppies were born to two female dogs in Sverdrup's train, on the same day, but they could not be kept alive in the bitter weather and rough march. "Between these two dogs there had hitherto been great jealousy, but now 'Indiana' treated 'Vesla' with tenderness, lay down across her, and did all she could for her in every possible way. One of 'Indiana's' most passionate admirers was 'Truls,' a big fellow of 92 lbs. All his approaches were energetically repulsed by the fair one, and 'Truls,' who was usually as phlegmatic as he was greedy, lost his appetite, and quite broke down from the bitter qualms of jealousy."

On a similar occasion another female train-dog, "Kari" became very ill, but never gave in, except that she lost her appetite, would eat hardly anything, and became very thin. "The mate was quite unhappy about his dear 'Kari.' When, after an ended chase, the other dogs helped themselves to their hearts' content, and ate till they could hold no more, 'Kari' lay still and moped, and left her ration of delicious meat untouched. One raw and bitter day, ill and miserable as she was, she felt the cold very much. But 'Kari' was not only a good dog, but a wise one, and therefore 'Kari' knew what to do. She curled herself round in a ball and lay down close by one of her comrades, between his legs, where she would be sheltered as well as warm. This, however, was not at all to the mind of the dog in question, and he was ungallant enough to get up and change his place. But 'Kari' was equal even to this difficult situation. She took her allowance, went up to the dog, and put it down before his nose, as much as to say: 'Here, this is for you, now do be kind, and let me lie quiet!' Then she licked his face in a coaxing way, and curled herself round again in her old place. This time she was really allowed to remain in peace."

Copyright by Underwood and Underwood.

ESKIMO ENCAMPMENT, PETERAVIK, ELLESMERE LAND.

ESKIMO SKIN SUMMER TENTS AT ETAH.

Once three or four females in Sverdrup's pack each had a family of eight or ten puppies born nearly at the same time; and these families were quartered in a group of kennels near the "Fram," a little removed from the other kennels.

"But the lying-in hospital was visited by others in the less fortunate position of neither having nor expecting any puppies; and what did they there? Why, they stole the puppies whenever they got the chance; especially from those which had the largest litters. When they had got possession of one of the pretty little pups, they would lie—if they were allowed to—licking it and keeping it warm all day long.

"Among the proud mothers was one named 'Silden,' or more correctly 'Silla.' It might be thought she would have been happy, considering the large number of her offspring, but she was not happy enough, and was always on the alert to kidnap a few more pups, which she nursed with the same motherly tenderness that she did her own. By degrees, as the puppies all grew bigger, and their mothers began to go on small excursions, she took possession of the whole pack of little ones, and it was not till they were all crawling over her and round her, like ants in an anthill, that she appeared to be thoroughly happy. We crammed her with as much food as she could possibly eat, but she became so deplorably thin, that she could hardly hold together."

MISCELLANEOUS

THE SEARCH FOR THE SOUTH POLE

AN American placed the Stars and Stripes on the north pole in 1909. It was a Norwegian who succeeded in reaching the south pole in 1911; but the earlier work that contributed largely to the final success was done mainly by two Englishmen.

The south pole had been comparatively neglected on account of the unfavorable character of its surroundings, large masses of land being wanting, and the immense wastes of water of the south offering only a few islands possessing neither large mammals nor human inhabitants; while the Eskimos of the north have been of incalculable advantage to exploration. Magellan's southern voyage was not followed up for two hundred and fifty years. The first after him to reach high southern latitudes was James Cook, in 1774, and no other similar expeditions followed for fifty years more. Those best known were those of the French under Dumont d'Urville in 1839, of the Americans under Charles Wilkes, and of the English under James Ross, who in 1842 penetrated to the seventy-eighth degree.

The crossing of the antarctic circle by the famous "Challenger" expedition under Captain George S. Nares, in 1874, revived interest in the far South. The practical outcome of much discussion was the design of the "Discovery," an English ship built expressly for scientific exploration, and the appointment of Captain Robert Falcon Scott to command an antarctic expedition.

In August, 1901, Scott left the shores of England, and

by way of New Zealand crossed the antarctic circle on January 3, 1902. Three weeks later he reached the Great Ice Barrier which had stopped Ross in 1840. For a week Scott steamed along the Barrier. Mounts Erebus and Terror were plainly visible, and though he could nowhere discover Parry Mountains, yet he found distant land rising high above the sea, which he named King Edward VII.'s Land. Scott had brought with him a captive balloon in which he now rose to a height of eight hundred feet, from which he saw an unbroken glacier stream of vast extent stretching to the south.

It was now time to seek winter quarters, and Scott, returning to M'Murdo Bay, named by Ross, found that it was not a bay at all, but a strait leading southward. Here they landed their stores, set up their hut, and spent the winter, till on November 2, 1902, all was ready for a sledge-journey to the south. For fifty-nine days Scott led his little land-party of three, with four sledges and nineteen dogs, south. But the heavy snow was too much for the dogs, and one by one they died till not one was left, and the men had to drag and push the sledges themselves. Failing provisions at last compelled them to stop. Great mountain summits were seen beyond the farthest point reached.

"We have decided at last we have found something which is fitting to bear the name of him whom we most delight to honor," says Scott, "and Mount Markham it shall be called in memory of the father of the expedition."

It was December 30 when a tremendous blizzard stayed their last advance. "Chill and hungry," they lay all day in their sleeping-bags, miserable at the thought of turning back, too weak and ill to go on. With only provisions for a fortnight, they at last reluctantly turned home, staggering as far as their depot in thirteen days. Scott's companion Lieutenant Ernest H. Shackleton was smitten with scurvy; he was growing worse every day, and it was a relief when on February 2 they all reached the ship alive, "as near spent as three persons can well be." But they had done well: they had made the first long land journey ever made in the antarctic; they had reached a point which was farthest south; they had

tested new methods of travel; they had covered nine hundred and sixty miles in ninety-three days. Shackleton was now invalided home, but it was not till 1904 that the "Discovery" escaped from the frozen harbor to make her way home.

Shackleton had returned to England in 1903, but the mysterious south pole amid its wastes of ice and snow still called him back, and in command of the "Nimrod" he went forth in August, 1907, on the next British antarctic expedition, carrying a Union Jack, presented by the Queen, to plant on the spot farthest south. He actually placed it within ninety-seven miles of the pole itself!

With a petrol motor-car on board, Eskimo dogs, and Manchurian ponies, he left New Zealand on January 1, 1908, watched and cheered by some thirty thousand of his fellow-countrymen. Three weeks later they were in sight of the Great Ice Barrier, and a few days later the huge mountains of Erebus and Terror came into sight. Shackleton had hoped to reach King Edward VII.'s Land for winter quarters, but a formidable ice-pack prevented this, and they selected a place about twenty miles north of the "Discovery's" old winter quarters. Getting the wild little Manchurian ponies ashore was no light job; the poor little creatures were stiff after a month's constant buffeting, for the "Nimrod's" passage had been stormy. One after another they were now led out of their stalls into a horse-box and slung over the ice. Once on *terra firma* they seemed more at home, for they immediately began pawing the snow as they were wont to do in their far-away Manchurian home.

The spacious hut, brought out by Shackleton, was soon erected. Never was such a luxurious house set up on the bleak shores of the polar seas. There was a dark room for developing, acetylene gas for lighting, a good stove for warming, and comfortable cubicles decorated with pictures. The dark room was excellent, and never was a book of travels more beautifully illustrated than Shackleton's "Heart of the Antarctic."

True, during some of the winter storms and blizzards the hut shook and trembled so that every moment its occupants

thought it would be carried bodily away, but it stood its ground all right. The long winter was spent as usual in preparing for the spring expedition to the south, but it was October 29, 1908, before the weather made it possible to make a start. The party consisted of Shackleton, Adams, Marshall and Wild, each leading a pony which dragged a sledge with food for ninety-one days.

"A glorious day for our start," wrote Shackleton in his diary, "brilliant sunshine and a cloudless sky. As we left the hut where we had spent so many months in comfort we had a feeling of real regret that never again would we all be together there. A clasp of the hands means more than many words, and as we turned to acknowledge the men's cheer, and saw them standing on the ice by the familiar cliffs, I felt we must try to do well for the sake of every one concerned in the expedition."

New land in the shape of ice-clad mountains greeted the explorers on November 22. "It is a wonderful place we are in, all new to the world," says Shackleton; "there is an impression of limitless solitude about it that makes us feel so small as we trudge along, a few dark specks on the snowy plain."

They now had to quit the Barrier in order to travel south. Fortunately they found a gap, called the Southern Gateway, which afforded a direct line to the pole. But their ponies had suffered badly during the march; they had already been obliged to shoot three of them, and on December 7 the last pony fell down a crevasse and was killed. They had now reached a great plateau some seven thousand feet above the sea; it rose steadily toward the south, and Christmas day found them "lying in a little tent, isolated high on the roof of the world, far from the ways trodden by man." With forty-eight degrees of frost, drifting snow, and a biting wind, they spent the next few days hauling their sledges up a steep incline. They had now only a month's food left. Pressing on with reduced rations, in the face of freezing winds, they reached a height of ten thousand and fifty feet.

It was January 6, and they were in latitude 88°, when a

"blinding, shrieking blizzard" made all farther advance impossible. For sixty hours the four hungry explorers lay in their sleeping-bags, nearly perished with cold. "The most trying day we have yet spent," writes Shackleton, "our fingers and faces being continually frostbitten. To-morrow we will rush south with the flag. It is our last outward march."

The gale breaking, they marched on till January 9, when they stopped within ninety-seven miles of the pole, where they hoisted the Union Jack, and took possession of the great plateau in the King's name.

"We could see nothing but the dead-white snow-plain. There was no break in the plateau as it extended toward the pole. I am confident that the pole lies on the great plateau we have discovered miles and miles from any outstanding land."

And so the four men turned homeward. "Whatever our regret may be, we have done our best," said the leader, somewhat sadly. Blinding blizzards followed them as they made their way slowly back. On January 28 they reached the Great Ice Barrier. Their food was well-nigh spent; their daily rations consisted of six biscuits and some horse-meat taken from the bodies of the Manchurian ponies they had shot and left the November before. But the meat disagreed with most of them, and four very weak and ailing men staggered back to the "Nimrod" toward the end of February, 1909.

Shackleton reached England in the autumn of 1909 to find that another antarctic expedition was to leave her shores in the following summer under the command of Scott, in the "Terra Nova." It was one of the best-equipped expeditions that ever started; motor-sledges had been specially constructed to go over the deep snow, which was fatal to the motor-car carried by Shackleton. There were fifteen ponies and thirty dogs. Leaving England in July, 1910, Scott was established in winter quarters in M'Murdo Sound by January 26, 1911. It was November before he could start on the southern expedition.

"We left Hut Point on the evening of 2nd November," says

Scott. "For sixty miles we followed the track of the motors (sent on five days before). The ponies are going very steadily. We found the motor party awaiting us in latitude 80½ degrees south. The motors had proved entirely satisfactory, and the machines dragged heavy loads over the worst part of the Barrier surface, crossing several crevasses. The sole cause of abandonment was the overheating of the air-cooled engines. We are building snow-cairns at intervals of four miles to guide homeward parties and leaving a week's provisions at every degree of latitude. As we proceeded the weather grew worse, and snow-storms were frequent. The sky was continually overcast, and the land was rarely visible. The ponies, however, continued to pull splendidly."

As they proceeded south they encountered terrific storms of wind and snow, out of which they had constantly to dig the ponies. Christmas passed and the New Year of 1912 dawned. In his message written on January 3, when one hundred and fifty miles from the pole, Scott says: "I am going forward with a party of five men with a month's provisions, and the prospect of success seems good, provided that the weather holds and no unforeseen obstacles arise. I am sending back three men under Lieutenant Evans with this note. The weather on the plateau has been good on the whole. The sun has never deserted us. It is more than probable that no further news will be received from us this year, as our return must necessarily be late."

"I expect," said Lieutenant Evans, who arrived in England in June, 1912—"I expect that Scott reached the pole two weeks after I left him. His idea was to go to the pole and back as soon as possible. The organization of the southern journey was splendid."

Meanwhile the search for the south pole had been accomplished by Captain Roald Amundsen on December 14, 1911. A Norwegian, fired by the example of his fellow-countryman, Fridtjof Nansen, Amundsen had long been interested in both arctic and antarctic exploration. (See p. 463.) He had planned an expedition to the north pole, had made known his scheme, and, duly equipped for the voyage in Nansen's

little "Fram" (see p. 460), had set forth, when suddenly the world rang with the news that Peary had discovered the north pole, and that Amundsen had turned his prow southward and was determined to make a dash for the south pole. He landed in Whales Bay, some four hundred miles to the east of Scott's winter quarters, and his first visitors were the Englishmen on board the "Terra Nova," who were taking their ship to New Zealand for the winter.

After making a hut on the shore, Amundsen had actually started on his journey to the pole before Scott heard of his arrival.

"I am fully alive to the complication in the situation arising out of Amundsen's presence in the antarctic," wrote the English explorer, "but as any attempt at a race might have been fatal to our chance of getting to the pole at all, I decided to do exactly as I should have done had not Amundsen been here. If he gets to the pole he will be bound to do it rapidly with dogs, and one foresees that success will justify him."

The Norwegian explorer left his winter quarters on September 8 for his dash to the pole; but he started too early; three of his party had their feet frost-bitten, and the dogs suffered severely. So he turned back, and it was not till October 20, just a week before Scott's start, that he began in real earnest his historic journey. He was well off for food, for whales were plentiful on the shores of the bay, and seals, penguins, and gulls abounded. The expedition was well equipped, with eight explorers, four sledges, and thirteen dogs attached to each.

"Amundsen is a splendid leader, supreme in organization, and the essential in antarctic travel is to think out the difficulties before they arise." So said those who worked with him on his most successful journey.

Through dense fog and blinding blizzards the Norwegians now made their way south, their skis and sledges proving a substantial help. The crevasses in the ice were very bad; one dog dropped in and had to be abandoned; another day the dogs got across, but the sledge fell in, and it was necessary

to climb down the crevasse, unpack the sledge, and pull up piece by piece till it was possible to raise the empty sledge. So intense was the cold that the very brandy froze in the bottle and was served out in lumps.

"It did not taste much like brandy then," said the men, "but it burned our throats as we sucked it."

The dogs traveled well. Each man was responsible for his own team; he fed them and made them fond of him. Thus all through November the Norwegians traveled south, till they reached the vast plateau described by Shackleton. One tremendous peak, fifteen thousand feet high, they named "Fridtjof Nansen."

On December 14 they reached their goal; the weather was beautiful, the ground perfect for sledging.

"At 3 P.M. we made halt," says Amundsen. "According to our reckoning, we had reached our destination. All of us gathered round the colors—a beautiful silken flag; all hands took hold of it, and, planting it on the spot, we gave the vast plateau on which the pole is situate the name of 'The King Haakon VII.' It was a vast plain, alike in all directions, mile after mile."

Here in brilliant sunshine the little party camped, taking observations till December 17, when, fastening to the ground a little tent with the Norwegian flag and the "Fram" pennant, they gave it the name "Polheim" and started for home.

So the north and south poles yielded up their well-hoarded secrets, after centuries of withholding, within the short space of two and a half years! They had claimed more lives than any exploration had done before, or is ever likely to do again.

Of the final tragedy in this long, heroic struggle to wrest these secrets from their fierce guardians, mankind must keep from age to age the memory, with mingled feelings of admiration and pity. Scott's message of January 3, 1912, was the last word that came from him till, months after he had yielded up his life, his wonderful diaries, with their "record of high adventure, of bravery and loyalty," were found by a search-party.

On January 4 the last members of the supporting party

that had attended Scott and his four companions—who made up the "five-man unit," as he called the little party chosen for the final dash to the pole—turned back to their base. On the 15th, when twenty-seven miles from the pole, the five established their last depot for food intended for the return march. From there they went forward with confidence. "We *ought* to do it now," says Scott in the record.

Now came to them a great surprise and keen disappointment. After enduring all the usual hardships of travelers near the poles, they were to have their ambition and high hope baffled. On the 16th they "came up to a black flag tied to a sledge-bearer near by the remains of a camp, with sledge-tracks and ski-tracks going and coming, and the clear trace of dogs' paws—many dogs. This told the whole story: the Norwegians had arrived first.

"It is a terrible disappointment," writes Scott, "and I am very sorry for my loyal companions."

They went to the spot where Amundsen's tent still stood, and there they found the record of the Norwegian explorer and the four men who accompanied him to the pole. Their names bore the date of December 16, 1911.

Leaving a record of their own visit, the English explorers began their return journey north January 19. Bad weather soon set in, and the men found themselves weakening in the struggle through successive blizzards. A fall into a crevasse by Scott and Edgar Evans together was serious for Evans, who soon had another fall, and on February 17 he died. On March 15 the brave Captain Oates, sick and unwilling to hamper his companions, asked them to leave him behind; they of course refused; but next day Oates "went out into the blizzard and," says Scott, "we have not seen him since." "He was a brave soul," says the commander. "We knew that poor Oates was walking to his death, but though we tried to dissuade him, we knew it was the act of a brave man and an English gentleman. We all hope," he adds, "to meet the end with a similar spirit."

And in that spirit, there can be no doubt, they did meet the end. Still struggling through indescribable difficulties and

sufferings, the survivors reached their last camping-ground, within eleven miles of their main camp, where safety and food and care would have been found. Their food and fuel exhausted, they were held day after day in camp by the worst blizzard they had known. When the rescue-party arrived, November 12, 1912—eight months too late—this is what they saw in the tent:

"Captain Scott lay on his back as if asleep, but outside of his sleeping-bag. Doctor Wilson and Lieutenant Bowers were in their sleeping-bags, and it was apparent that they had been carefully wrapped up by Captain Scott, who evidently was the last to die.

"Lieutenant Bowers lay on his side exactly as if he were asleep. Doctor Wilson was sitting in a half-reclining position, his back against the side of the tent, facing us as we entered. On his features were the traces of a faint smile."

In his final "Message to Public," found with his other notes "beside his body in the snow-shrouded tent," Scott says:

"Had we lived, I should have had a tale to tell of the hardihood, endurance, and courage of my companions which would have stirred the heart of every Englishman. These rough notes and our dead bodies must tell the tale."

And the American discoverer of the north pole, Robert E. Peary, pays this tribute to the heroic English explorer and his comrades:

"A splendid feat, a splendid tragedy, a splendid epic—written, like many another British epic dotted over the globe, in a language which any creed and race and tongue of man can understand."

LIST OF BEST BOOKS ON TRAVELERS AND EXPLORERS

ABBOTT, S. C. . . . . *Life of John Paul Jones*
ASHER, G. . . . . *Henry Hudson*
BEESLY, A. H. . . . . *Sir John Franklin*
BESANT, WALTER . . . . *Companions of Columbus*
BRADLEY, ARTHUR GRANVILLE . *The Making of Canada*
BRASSEY, LADY . . . . . *Voyages in the Sunbeam*
1. *Round the World*
2. *In the Tropics and Trades*
3. *Last Voyage to India and Australia*
BROOKS, PHILLIPS . . . . . *Letters of Travel*
BULLEN, FRANK T. . . . *Cruise of the Cachelot*
BUTTERWORTH, HEZEKIAH . . . *Story of Magellan*
CARPENTER, FRANK G.
Travels through North America with the Children
CLARK, RUSSELL W. . . . . *Dampier*
CONDER, CAPT. CLAUDE R. . . . . *Palestine*
CORBETT, JULIEN . . *Drake (English Men of Action)*
DARWIN, CHARLES
Voyage of H.M.S. Beagle Round The World
DU CHAILLU, PAUL B. . *The Land of the Midnight Sun*
FARRER, REGINALD . . . . . *In Old Ceylon*
FREEMAN, EDWARD AUGUSTUS . . *Sketches of Travel*
GREELY, ADOLPHUS WASHINGTON *Explorers and Travelers*
GRIMSHAW, BEATRICE . . *In the Strange South Seas*
GUILLEMARD, DR. FRANCIS H. H. *Magellan and the Pacific*
HALE, EDWARD EVERETT
Stories of Discovery as Told by Discoverers
HAWEIS, HUGH REGINALD . . . *Travel and Talk*
HELPS, SIR ARTHUR . . . . *Life of Columbus*
HIGGINSON, ELLA RHOADS . *Alaska the Great Country*

HIGGINSON, THOMAS WENTWORTH, *Book of American Explorers*
HUGHES, THOMAS . . . . . *David Livingstone*
HUMBOLDT, ALEXANDER VON. . . *Travels in America*
INGERSOLL, ERNEST . . *Knocking Round the Rockies*
IRVING, THEODORE . . . . . *De Soto*
IRVING, WASHINGTON . . . . . *Astoria*
IRVING, WASHINGTON . . . . . *Life of Columbus*
JACKSON, HELEN HUNT . . . . *Bits of Travel*
JENKS, TUDOR . . . *Boys' Book of Explorations*
JOHNSON, H. H. . . . *Livingstone and Central Africa*
JONES, M. C. . . . . *Travel for Women*
KELTIE, J. S. (Ed.) . . . . *Bruce at the Nile*
KELTIE, J. S. (Ed.) . . *Captain Cook and Australasia*
KELTIE, J. S. (Ed.) . . . . *Cartier and Canada*
KNOX, THOMAS W. . *Boy Travelers in South America*
KNOX, THOMAS W. . . . . *How to Travel*
KNOX, THOMAS W. . *Marco Polo for Boys and Girls*
LE FROY, J. H. (Ed.) . . . . . *John Smith*
LORD-BAINS *Shifts and Expedients of Camp Life, Travel, etc.*
LUMMIS, CHARLES F. . . . *The Spanish Pioneers*
MARKHAM, ALBERT
Sir John Franklin and the North West Passage
MARKHAM, CLEMENTS ROBERTS . . . *John Davis*
NANSEN, FRIDTJOF . . . . . *Farthest North*
OTIS, JAMES (Ed.) . . *The Life of John Paul Jones*
PARKMAN, FRANCIS . *The California and Oregon Trail*
PEARY, JOSEPHINE D. . . . . *My Arctic Journal*
PRESCOTT, WILLIAM H. . . . . *Cortes*
RAVENSTEIN, E. G. (Ed.)
Vasco da Gama and the Highway to India
SCHWARTZ, HENRY B. . . . . *In Togo's Country*
SELOUS, FREDERICK COURTENAY . *Travel and Big Game*
SEWARD, WILLIAM HENRY . . *Travels Around the World*
STANLEY, SIR HENRY MORTON . . *My Early Travels*
STEVENSON, ROBERT LOUIS . *Travels With a Donkey*
STOCKTON, FRANK R. . *Buccaneers and Pirates of Our Coast*
STRACHEY, SIR RICHARD (Lieut. Gen.) . *The Himalayas*
TAYLOR, BAYARD . . . . . *Library of Travel*

THOMSON, JOSEPH . . . *Mungo Park and the Niger*
TOWLE, GEORGE MAKEPEACE . . . . . *Pizarro*
VAN DYKE, HENRY . *Out-of-doors in the Holy Land*
VERNE, JULES . . . *Explorations of the World*
VINCENT, FRANK . . *The Land of the White Elephant*
WISHARD, JOHN G. . . . *Twenty Years in Persia*

THE UNIVERSITY PRESS, CAMBRIDGE, U. S. A.